

## elaware Medical gournal

Official Publication of the Medical Society of Delaware



APRIL, 1960 .....

MEMORIAL HOSPITAL ISSUE In Memory of Dr. Spackman

## ILOSONE® WORKS FOR CHILDREN

to assure a decisive response in common bacterial infections...

Lauryl Sulfate

### 125 SUSPENSION

(propionyl erythromycin ester lauryl sulfate, Lilly)

Lauryl Sulfate

### DROPS

Lauryl Sulfate

#### SILL FA SUSPENSION

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1960 ANNUAL MEETING Rehoboth — September 8, 9, 10



In the struggle against sepsis, CHLOROMYCETIN – effective "... against most bacteria, Rickettsia, Treponema, and some viruses..."1—has proved a dependable weapon in a variety of infections.

"Over 90 per cent of staphylococci isolated from infections in most institutions are relatively sensitive to chloramphenicol." In a study of a significant number of gram-negative organisms it was found that CHLOROMYCETIN was more effective in *in vitro* sensitivity tests than were other widely used broad-spectrum antibiotics. Moreover, through the years, the incidence of strains of bacteria resistant to CHLOROMYCETIN has remained virtually constant and strikingly low.<sup>4-7</sup>

### IN VITRO SENSITIVITY OF GRAM-POSITIVE ORGANISMS TO CHLOROMYCETIN AND TO THREE OTHER BROAD-SPECTRUM ANTIBIOTICS\*

CHLOROMYCETIN (254 strains)	and the second second	89%
ANTIBIOTIC A (260 strains)	79%	
ANTIBIOTIC B (261 strains)	77%	
ANTIBIOTIC C (255 strains)	73%	

<sup>\*</sup>Adapted from Leming & Flanigan.3

## CHLOROMYCETIN

#### **OUTSTANDINGLY EFFECTIVE AGAINST A WIDE RANGE OF PATHOGENS**

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in a variety of forms, including Kapseals® of 250 mg., in bottles of 16 and 100.

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References: (1) Morton, J. J.: Yale J. Biol. & Med. 31:397, 1959. (2) Rogers, D. E., & Louria, D. B.: New England J. Med. 261:86, 1959, (3) Leming, B. H., Jr., & Flanigan, C., Jr., in Welch, H., & Marti-Ibañez, F.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 414. (4) Edwards, T. S.: Am. J. Ophth. 48:19, 1959. (5) Olarte, J., & de la Torre, J. A.: Am. J. Trop. Med. 18:324, 1959. (6) Suter, L. S., & Ulrich, E. W.: Antibiotics & Chemother. 9:38, 1959. (7) Holloway, W. J., & Scott, E. G.: Delaware M. J. 30:175, 1958.

### IN VITRO SENSITIVITY OF GRAM-NEGATIVE ORGANISMS TO CHLOROMYCETIN AND TO THREE OTHER BROAD-SPECTRUM ANTIBIOTICS\*

CHLOROMYCETIN (244 strains)

62%

ANTIBIOTIC A (245 strains)

AR%

ANTIBIOTIC B (237 strains)

55%

ANTIBIOTIC C (236 strains)

\*Adapted from Leming & Flanigan,3.

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## elaware Medical gournal

Official Publication of the Medical Society of Delaware

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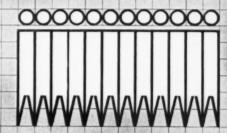
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treats more patients more effectively.

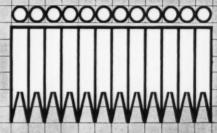
Of 45 arthritic patients who were refractory to other corticosteroids\*



22 were successfully treated with Decadron'

- Bojand, E. W., and Headley, N. E.: Paper read before the Am. Rheum. Assoc., San Francisco, Calif., June 21, 1958.
   Bunim, J. J., et al.: Paper read before the Am. Rheum. Assoc., San Francisco, Calif., June 21, 1958.
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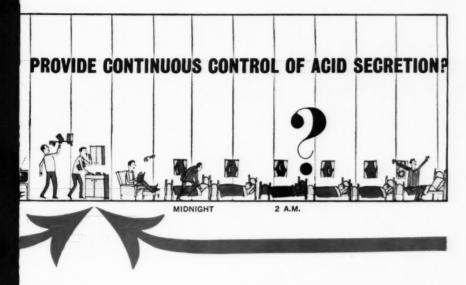
#### LOOK AT THE RESULTS WITH ENARAX4,5:

Does the medication you now prescribe assure you of all these benefits? If not, why not put your next patient with peptic ulcer or G.I. dysfunction on therapy that does.

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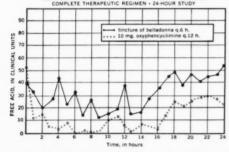
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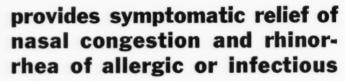


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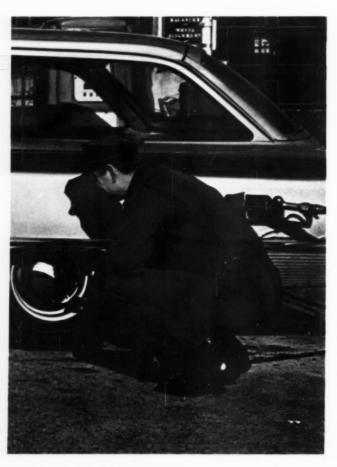
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### relaxes skeletal muscle spasm so the patient can continue to work

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Trancopal is also an effective agent for patients in anxiety and tension states. According to recent clinical reports, 1.5 it calms the patients but allows them to continue their work or other activity. Indeed, Lichtman found that his patients with anxiety "... were in many instances able to continue their normal activities where previously they had been considerably restricted ..." He observed that Trancopal brought good to excellent relief to 114 of 120 patients in anxiety states. Ganz, who noted good to excellent relief in 32 of 35 patients with globus hystericus, and in his entire series of 100 patients in anxiety or tension states, comments: "Chlormethazanone [Trancopal], by relieving the psychogenic symptoms, allows the patient to use his energies in a more productive manner in overcoming his basic problems."

Relieves dysmenorrhea — Trancopal has also proved to be a useful medication in the treatment of patients with dysmenorrhea, 1.4.6 probably producing its effect "... by means of a combination of muscle relaxant and tranquilizing actions."

#### Indications

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Neck pain (torticollis)	Osteoarthritis	Premenstrual tension	
Bursitis	Rheumatoid arthritis	Anxiety and tension states	
Fibrositis	Disc syndrome	Asthma	
Myositis	Postoperative muscle spasm	Angina pectoris	
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**Dosage:** Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms generally occurs promptly and lasts from four to six hours.

How Supplied: Trancopal Caplets® 100 mg. (peach colored, scored) and 200 mg. (green colored, scored), bottles of 100.

References: 1. Lichtman, A. L.: Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958. 2. Mullin, W. G., and Epifano, Leonard: Am. Pract. & Digest Treat. 10:1743, Oct., 1959. 3. Gruenberg, Friedrich: Current Therap. Res. 2:1, Jan., 1960. 4. Shanaphy, J. F.: Current Therap. Res. 1:59, Oct., 1959. 5. Ganz, S. E.: J. Indiana M. A. 52:1134, July, 1959. 6. Stough, A. R.: J. Oklahoma M. A. 52:575, Sept., 1959.

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clinical reports on anxiety show that

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Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933



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Smooth, balanced action lifts depression as it calms anxiety...rapidly and safely

Balances the mood – no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient – they often aggravate anxiety and tension. And although amphetamine-barbiturate combinations may counteract excessive stimulation – they often deepen depression.

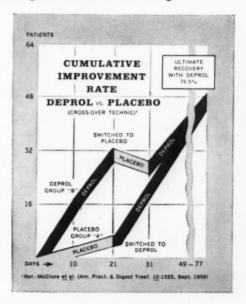
In contrast to such "seesaw" effects, Deprol lifts depression as it calms anxiety — both at the same time.

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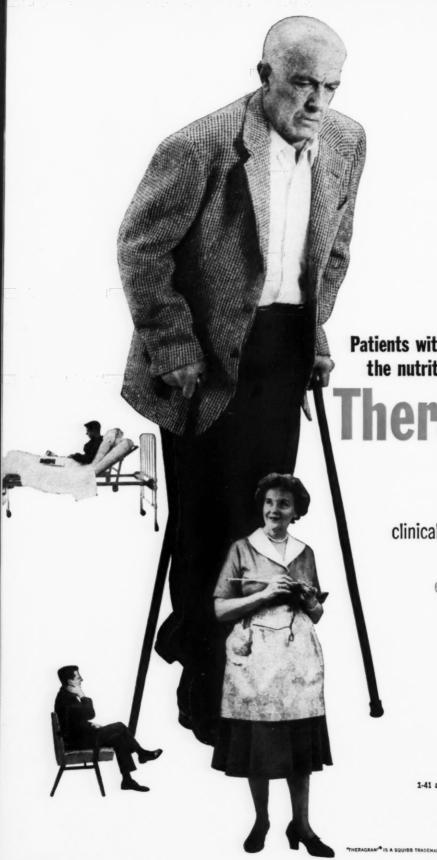
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Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be gradually increased up to 3 tablets q.i.d. Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate. Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.



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in arthritis 19,19,20,29

in hepatic disease 2.3.4.5.30

in malabsorption syndrome 1,2,6,27

in degenerative disease 6.7,19,20,40

in cardiac disease 23, 28, 29, 38, 41

in dermatitis24,39

in peptic ulcer \*.21,30

in neuroses & psychiatric disorders 25,28

in diabetes mellitus 31,32,33,38

in alcoholism9,11,35,37,30

in ulcerative colitis 10,14,10

in osteoporosis 13,19,20

in pancreatitis

in female climacteric 12,34

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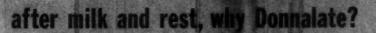
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1-41 a list of the above references will be supplied on request.





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FOR HIGHLY EFFECTIVE THERAPY
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CAUSED BY SUSCEPTIBLE PATHOGENS...NEW

## SYNC

Significance of complementary action of isomers in SYNCILLIN The antibiotic effect of the clinically available mixture, SYNCILLIN, is greater than that of either of its two component isomers alone against many important pathogens, including some penicillinresistant staphylococci. This phenomenon has been described as *Isomeric Complementarity*.

Significance of higher blood levels with SYNCILLIN Higher blood levels may be of value with organisms of only moderate penicillin sensitivity where doubling the blood concentration may be essential for effective bactericidal action. In addition, these higher levels may be necessary where there is infection in areas with a poor blood supply. Under these circumstances a higher blood concentration may provide the increased diffusion pressure required to deliver adequate amounts to the tissue. Also, antibiotic activity of SYNCILLIN is directly proportional to oral dosage. Increasing the dosage may, therefore, enhance the drug's effectiveness in certain cases.

Efficacy of SYNCILLIN against staphylococci and other resistant organisms Studies have shown that SYNCILLIN is effective in vitro against a higher percentage of hospital "staph" strains, than penicillin G and penicillin V.<sup>1,2</sup> Therefore, if clinical judgment indicates the use of penicillin, SYNCILLIN might be expected to be somewhat more effective. However, since some strains are still resistant to SYNCILLIN as well as to the other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment.

There have recently been reports of decreased efficacy of penicillin in streptococcal<sup>3</sup> and gonococcal<sup>4,5</sup> infections. The emergence of penicillinresistant gonococci appears to be associated with an increase in the incidence of gonorrhea all over the world. When a less sensitive strain is encountered the higher blood levels produced by SYNCILLIN may be most helpful.



major therapeutic advantages accompany molecular asymmetry

## ILLIIN

potassium phenethicillin (POTASSIUM PENICILLIN-152)

Relation of intermittent high blood levels of SYNCILLIN to antibacterial efficacy

SYNCILLIN, like all clinically available penicillins, is bactericidal. Periodic high blood concentrations may be sufficient to permit complete eradication of sensitive pathogens. According to Eagle,6 "Soon after penicillin attains effective concentrations, the bacteria cease multiplying; and the bacteriostatic effect persists for a number of hours after penicillin has fallen to concentrations that are wholly ineffective. . . . The therapeutic significance of this postpenicillin recovery period is enhanced by the fact that the recovering bacteria, damaged but not killed by the previous exposure to penicillin, are abnormally susceptible to the host defenses. In consequence, the bactericidal process in vivo continues for many hours after the drug itself has fallen to ineffective concentrations."

Reduced rate of inactivation of SYNCILLIN by staph penicillinase Bacterial resistance to penicillin has been attributed to the action of penicillin-inactivating enzymes produced by the invading organisms. SYNCILLIN is less affected by staphylococcal penicillinase than either of its component isomers. Further, SYNCILLIN is shown to be more slowly inactivated by this enzyme than penicillin V or penicillin G. Penicillinase from B. cereus likewise inactivates SYNCILLIN less rapidly than penicillin V or G.

Indications: SYNCILLIN is recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci. In addition, SYNCILLIN is effective in vitro against certain strains of staphylococci resistant to other penicillins. SYNCILLIN, like other oral penicillins, is not recommended at the present time in deepseated or chronic infections, subacute bacterial endocarditis, meningitis, or syphilis.

**Dosage:** 125 mg. or 250 mg. three times daily, depending on the severity of infection. Larger doses (e.g., 500 mg. t.i.d.) may be used for more severe infections. SYNCILLIN may be administered without regard to meals. Beta hemolytic streptococcal infections should be treated with SYNCILLIN for at least ten days.

Precautions: At the present time it is not possible to draw definite conclusions regarding the incidence of allergenicity to SYNCILLIN or its cross-allergenicity with natural penicillins. Therefore, the usual precautions for oral penicillin therapy should always be observed. Patients with histories of asthma, hay fever, urticaria, or previous reactions to penicillin should be watched with special care. Administration of oral penicillin, in rare instances, may provoke acute anaphylaxis, particularly in penicillin-sensitive individuals.

Diarrhea has been reported occasionally following heavy dosage. If this occurs, lengthen the interval between dosages.

If superinfection occurs during therapy, appropriate measures should be taken. Since some strains of staphylococci are resistant to SYNCILLIN as well as to other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment. As is true with all antibiotics, clinical response does not always correlate with laboratory bacterial sensitivity reports.

Supply: 125 and 250 mg. tablets, bottles of 25 and 100. 125 mg. powder for oral solution, 60 ml. vials.

References: 1. Wright, W. W.;
Microbiology Report to Briatol
Laboratories Inc. 2. Morigi, E. M. E.;
Wheatley, W. B., and Albright, H.:
Paper presented at the Seventh Antibiotic
Symposium, November 4-6, 1959,
Washington, D.C. 3. Editorial: New
England J. Med. 261:305 (Aug. 6) 1959.
4. King, A.: Lancet 1-651 (March 29)
1958. 5. Epstein, E.: J.A.M.A. 169:1055
(March 7) 1959. 6. Eagle, H. and
Musselman, A. D.: J. Bact. 58:475, 1949.



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Because a swift-acting spermicide best meets the variables of spermatozoan activity.

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\*Berberian, D. A., and Slighter, R. G.: J.A.M.A. 168:2257 (Dec. 27) 1958.

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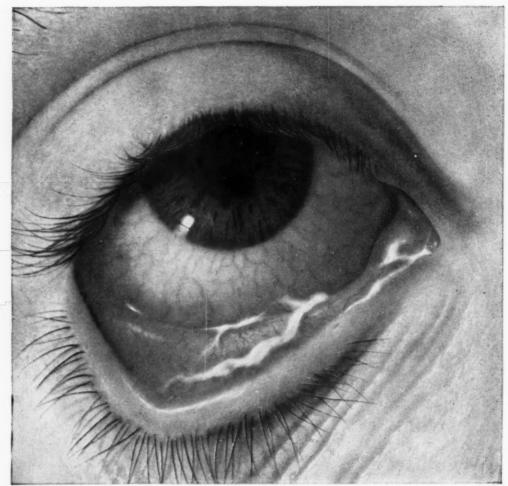
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Winkelstein, A.: Am. J. Gastroenterol, 32:66-70 (July) 1959.

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1. Lippmann, O.: Arch. Ophth. 57:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. 46:740, November 1958. supplied: 0.5% Sterile Ophthalmic Solution NEO-HYDELTRASOL (with neomycin sulfate) and 0.5% Sterile Ophthalmic Solution HYDELTRASOL\*. In 5 cc. and 2.5 cc dropper vials. Also available as 0.25% Ophthalmic Ointment NEO-HYDELTRASOL (with neomycin sulfate) and 0.25% Ophthalmic Ointment HYDELTRASOL. In 3.5 Gm. tubes.

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Hinkel, E. T., Jr.; Fisher, M. P., and Tainter,
 M. L.: J. Am. Pharm. A. (Scient. Ed.) 48:380,
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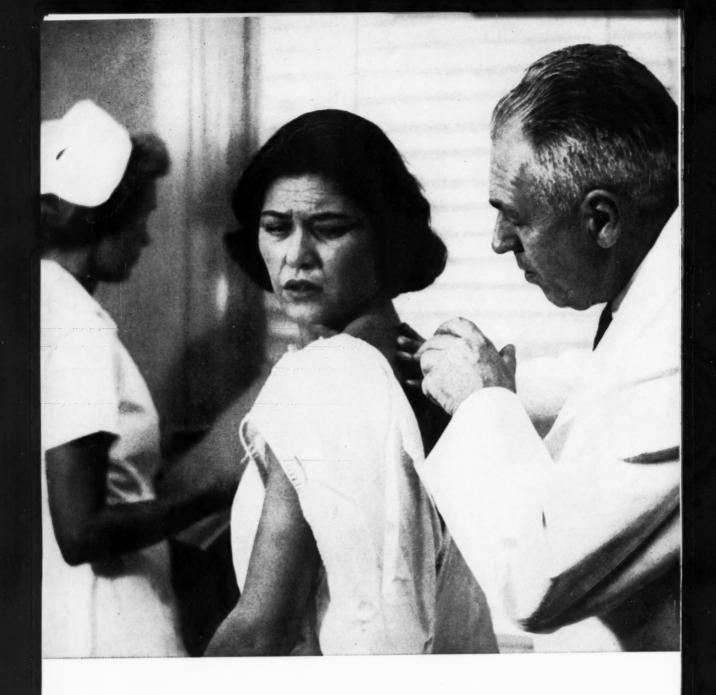
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\*Knudsen, E. T., and Rolinson, G. N.: Lancet 2:1105 (Dec.19) 1959. SOURT TRACEMENT IS A Squibb Quality-the Priceless Ingredient

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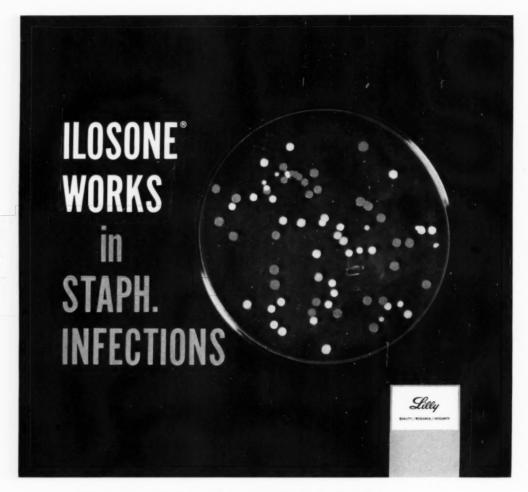
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## Delaware Medical gournal

**APRIL, 1960** 

NUMBER 4

**VOLUME 32** 



This volume is dedicated to the memory of

Dr. James G. Spackman by his former students.

MEMORIAL HOSPITAL ISSUE



1889-1959

### James Guie Spackman, M.D.

This address was delivered on the occasion of the presentation of Dr. Spackman's portrait to the Memorial Hospital by the Nurses' Alumnae Association. Dr. Pierson is successor to Dr. Spackman as Director, Department of Surgery, Memorial Hospital, Wilmington, Delaware.

JOHN C. PIERSON, M.D.

Your chairman was very kind in asking me to contribute some thoughts to this fine testimonial that you have prepared in honor of Dr. Spackman. I frankly confess, however, to a very real sense of inadequacy for such an assignment. In accepting her invitation, I only hope that by reason of my long and intimate association with Dr. Spackman, I may be able to recall to you circumstances in his life and work at your hospital that will make him seem much more than a revered name or a legendary figure out of the dim past.

That something unique and outstanding characterized the life of Dr. Spackman is attested to by the very fact that we are meeting here tonight and that the Nurses' Alumnae Association was prompted to present a portrait in his honor to the hospital that he served with such distinction. No words of mine can add to the glory of his achievements or intensify the impact that his work and his personality exerted upon the life of the Memorial Hospital and the community it serves.

Perhaps if I can sketch briefly some of the changes that came about during his active years in the hospital you may sense the kind of person he was and appreciate the magnitude of his accomplishments.

When he arrived in Wilmington in 1915 to devote himself exclusively to the practice of surgery he was immediately confronted with obstacles and frustrations that can hardly be envisaged by most of you. In the first place, while he was hardly looked upon

as persona non grata in a literal sense, most of the doctors at the hospital felt that they were "doing all right" under the system in vogue when he first came into the picture, viz., to call one of their favorite surgeons from Philadelphia for practically all of their elective cases and even for most of their emergencies. Indeed, it was not until after his return from military service in 1919 that this subtle prejudice was overcome. Almost suddenly, it seemed, a combination of factors broke down all pre-existing bar-His twenty-four-hour-a-day availability, added maturity, obvious superiority as a surgeon, and a personality, not only magnetic, but one that inspired confidence in both patients and doctors, were not to be denied. The hero of our epic had truly come into his own.

To say that he had now arrived is not to imply that no problems remained. Even at this stage (1919) he was handicapped by a woeful lack of basic facilities so necessary for safe and successful surgery. A single interne covered the entire hospital-maternity, accident ward, operating room, laboratory, bed patients. Until now, anaesthetics (chloroform or ether) were being administered by the medical man whose patient was being operated upon. X-ray services were supplied in the simplest form and on a part-time basis by whatever general practitioner showed a particular interest in the field. There was no trained laboratory technician and no pathologist nearer than Philadelphia.

Such deficiencies might have been taken in stride by a person of different make-up; either he would have settled into the pattern already well established—rolling with the punch day after day—or else he would have become sufficiently discouraged to pull up stakes and seek the realization of his dreams and his ambitions in a more propitious atmosphere. Neither of these alternatives would have been in character for the person we are honoring tonight.

Toward the end of 1919 a physiciananaesthetist (Dr. Lotz) had become a part of the operating room team—the first anaesthesia coverage of this type to be introduced in Wilmington. About this same time, Dr. Washburn became director of the hospital laboratory, and, through him, Miss Frances Pennypacker was engaged as fulltime technician. She served in this capacity through many fruitful years, and, I am sure, is still remembered by many of you for her warmth of personality and her selfless devotion to her job.

By 1922, Dr. Spackman's practice had reached such proportions that he found it necessary to employ a full-time first assistant (Dr. Wallace Johnson). The expedient, now so natural and common-place, was at that time new to medical practice in Wilmington, and by some was even looked upon as a kind of stunt or form of showmanship. Rather, as subsequent events were destined to prove, this particular decision was motivated by two dominant elements that became more and more evident as his professional life unfolded. One was a painstaking attention to the minutest detail where his patients' needs were concerned; the other was a latent but growing compulsion to teach—to pass on to others the things he had already learned. Surely, in responding to both of these inner demands, he came to find much of his true raison d'etre and his greatest satisfaction as a doctor and surgeon.

Gradually, and with singular success, a well-rounded team was being put on the field at what was by this time commonly referred to as Dr. Spackman's hospital.

In 1926, Dr. Allen became director of the X-ray Department. His importance in thus closing a large gap in the complete care of the patient cannot be overstated, and I am sure that no one appreciated his indispensability more than did Dr. Spackman himself.

There remained, however, a kind of makeshift arrangement so far as the important field of pathology was concerned. It was still necessary to send surgical specimens to Philadelphia and then await a telephone or special-delivery-letter report from Dr. Sappington, chief of the pathology department at Hahnemann Hospital. It was not until Dr. D. M. Gay was engaged to fill this role at our hospital that immediate tissue diagnosis (frozen section biopsy) was made available. Having myself lived through the period of off-the-premises laboratory service and then enjoyed the luxury of a competent on-the-scene pathologist, it was easy to share Dr. Spackman's delight at having Dr. Gay added to the team.

It is said that necessity is the mother of invention; and, in that sense, perhaps, the lack of a full-time pathologist for so long was a fortuitous circumstance in the career of Dr. Spackman. He was compelled to depend much more upon his own personal resources, so that the art of clinical diagnosis of cancer, especially breast cancer, became an added talent in his already rich store of assets. His experience in this particular field and his aggressive approach toward all tumor problems soon resulted in his enjoying almost a monopoly in this type of surgical practice. "Nothing succeeds like success" is more than a familiar aphorism-its truth was abundantly illustrated in the case of Dr. Spackman. He found himself confronted not only with a snowballing volume of patients, but with diagnostic and operative problems of increasing magnitude.

One misses the significance of this meteoric career, however, if one fails to sense the underlying nature of the man himself. Quite apart from his extraordinary technical proficiency, there was a driv-

ing force that dominated his entire life. I can find no single word that fully describes what this force was. Certainly, it was a deep and abiding love for surgery-so compelling that the frustrations of his first years in Wilmington were not enough to allow for compromise with them, or retreat from them. He was determined that his surgery was going to be of such a high quality that patients would no longer feel safer in going to Philadelphia, New York, or Baltimore for their operations. That he realized this ideal is, of course, a matter of record-fully documented. His success in achieving this goal can be attributed in part to another character trait, viz., his boundless and irrepressible enthusiasm for all things medical. So transparent, so contagious and so stimulating was it that not only did he attract others to him perforce, but they, in turn, became imbued with the same idealism, and with the same pride of performance in their own respective fields.

Under such a dynamic influence, the hospital was bound to grow; and its reputation, especially as a surgical center, came to be felt well beyond the limits of the city and state. His unrelenting pursuit of perfection reflected itself in many innovations that now seem routine and trite. How many of you realize that the first blood transfusion in Wilmington was given by Dr. Spackman, and, for several years, blood replacement was available only at your hospital? It was natural that, as a result of this background of experience, the first blood bank to be put into operation in Delaware was at the Memorial Hospital. Operative procedures were becoming more complicated and of much greater scope, so that again the need, so keenly recognized, became parent to the remedy. With increasing experience in the field of cancer surgery, Dr. Spackman developed a more comprehensive concept of the total needs of the cancer patient. Accordingly, a tumor clinic (The Carpenter Clinic) was established in 1935, so that X-ray and radium therapy might be made available when indicated. This was the first accreddited tumor clinic in the state. Two years

later, a surgical resident was added to the House Staff group, and, by 1940, a three-year surgical residency was inaugurated with Dr. Kustrup, Dr. Jones and Dr. Brittingham implementing the program. This was the first approved residency in any specialty within the city or state. The value of this residency system to the hospital and to the welfare of its patients must be self-evident to all who have been exposed to its day-to-day operation over the last twenty-five years.

It is easy to live among these various refinements of hospital practice at the Memorial Hospital and yet fail to realize what spirit brought them into being. Those firsts that have been enumerated, together with many others, are, in fact, living monuments to the contribution Dr. Spackman made to the hospital and its host of patients. They bear eloquent testimony to the creed that guided him throughout his surgical career, viz., to give the very most of his time and his talents to ensure the comfort, and, if possible, the recovery of his patients. His integrity as a surgeon was instinctive, strict, and uncompromising, and has set a pattern that is both challenging and inspiring to all who practice surgery in the hospital today.

I am sure that his rigid adherence to what he called honest surgery represents one of his most significant and most enduring contributions to the reputation and, indeed, to the personality of the Memorial Hospital as we know it today.

This, then, must be the true substance of our tribute to the memory of Dr. James G. Spackman. It is the simple fact that his distinguished service to the hospital has made us aware not only of our rich heritage, but of our incalculable debt to him. I would not attempt to put into words my own sense of indebtedness, but I would like to leave with you these lines of Robert Frost. They seem to bespeak my own very personal feeling—

"The woods are lovely, dark and deep But I have promises to keep And miles to walk before I sleep."  Cancer of the thyroid is a disease of which the treatment is far from being standardized.
 This paper presents the author's views in the management of fifty-one patients with this condition.

#### THE MANAGEMENT OF CARCINOMA

JOSEPH N. ATTIE, M.D.

#### Merits of Management Should be Considered

Considerable differences in the management of carcinoma of the thyroid have been reported in recent years, making it extremely difficult to interpret results and to decide on the merits of the various therapeutic approaches. Some authors practice marked conservatism in the handling of thyroid nodules1,2 because of reports minimizing the incidence and dangers of thyroid cancer.3 Most authors<sup>4-7</sup> are in agreement that cancer is present in about 10% of thyroid nodules and that the treatment of choice consists of resection of the involved lobe for all solitary nodules and the performance of a radical neck dissection on the involved side if carcinoma is found. One group of surgeons advocates a more radical approach consisting of extending the lymph node dissection into the mediastinum.8,9 Some authors10,11 prefer total thyroidectomy and removal of the paratracheal lymph nodes. One author<sup>12</sup> removes individual groups of involved lymph nodes in preference to the conventional neck dissection. Because of this lack of agreement, the management of 51 cases of carcinoma of the thyroid operated upon in the eight years ending August 1, 1959, is presented.

#### Incidence

During the past eight years there were 450 thyroidectomies perfored by me, 51 of which were for carcinoma of the thyroid. Of the carcinoma cases, 13 did not have a thyroid mass as the first symptom - 7 had lateral lymph node enlargement with no palpable thyroid tumor; 4 were previously operated upon and the diagnosis made prior to being seen by me; one patient had dysphagia and had a filling defect in the cervical esophagus on barium study which proved to be thyroid cancer with invasion of the esophagus; one patient had bone metastasis and was thyroidectomized in order to enhance radioactive iodine pickup in the metastasis. Thus there were 38 cancers found in a total of 437 thyroidectomies, an incidence of 8.7%. Further analysis of these cases reveals the following (Table I): There were 38 toxic diffuse goiters with no cancers; 19 toxic nodular goiters with one cancer, or 5.2%; 256 clinically solitary nodules with 32 cancers, or 12.5%; 107 clinically multinodular thyroids with 5 cancers, or 4.7%; 17 patients

TABLE I. Incidence of cancer in various types of goiter

or gotter				
	No. cases	No. cancer	% cancer	
Toxic diffuse goiter	38	0	0	
Toxic nodular goiter	19	1	5.2	
Non-toxic solitary nodule	256	32	12.5	
Non-toxic multinodular goiter	107	5	4.7	
Chronic thyroiditis	17	0	0	
Total	437	38	8.7	

#### OF THE THYROID

had various types of thyroiditis. Incidentally, 63 of the cases with clinically solitary nodules proved to have multiple nodules at operation.

The average age in this series of 51 thyroid cancers was 37. There were 7 patients below the age of 20, 9 between 20 and 30, 11 between 30 and 40, 12 between 40 and 50, 5 between 50 and 60, and 7 above the age of 60. There were 14 men and 37 women, or 1 to  $2\frac{1}{2}$ ; since thyroid nodules are eight times as prevalent in women as in men, it is evident that a thyroid nodule in a man is more likely to be malignant than one in a woman.

#### Symptoms

The usually described classical symptoms of thyroid cancer — hardness and irregularity, fixation and/or hoarseness associated with vocal cord paralysis — were often absent or late findings. In 37 patients the presenting complaint was a mass in the thyroid gland. Carcinoma of the thyroid was suspected in 11 of these cases, or 29% — in 3 of the 11 because of the presence of a lateral node in addition to the thyroid nodule, and in the other 8 because of hardness, irregularity or fixation of the gland.

There were no cases of vocal cord paralysis, although in 2 patients a recurrent laryngeal nerve had to be sacrificed because of involvement in the cancer. One case was discovered incidentally in a patient with toxic nodular goiter - neck dissection in this patient disclosed several invaded lymph nodes. In 7 patients the presenting finding was a lateral node enlargement which proved to harbor metastatic thyroid cancer on biopsy. In each of these patients a thyroid tumor was not palpable preoperatively but one was found upon removal of the ipselateral lobe in every instance. These cases would have at one time been considered lateral aberrant thyroid cancers. As mentioned previously one patient was seen with bone metastasis as the first sign, and one appeared with a cervical esophageal lesion which was secondary to a carcinoma in the thyroid gland. The latter patient died shortly after thyroidectomy, cervical esophagectomy and esaphago-jejunostomy, and represents the only fatality in the entire series. Four patients were first seen after the diagnosis was established by previous surgery.

Several reports have been published<sup>13,15</sup> describing the use of radioactive iodine in

the pre-operative evaluation of thyroid nodules. It has been shown that carcinoma is more prevalent in hypofunctioning ("cold") nodules than in hyperfunctioning ("hot") nodules, and some have advised against surgery in the "hot" nodules because of these findings. In the past 31/2 years, I have studied 107 nodules of the thyroid gland and found cancer in 15 of 63 "hot" nodules, or 24%, 1 of 28 "warm" (neither hyper nor hypofunctioning as compared with the rest of the gland) nodules, or 3.6%, and in 2 of 16 "hot" nodules, or 12.5%. Because of this experience, I feel that all solitary nodules should be operated upon regardless of their affinity for iodine.

#### Treatment

The management varied, depending upon the histological type of carcinoma and the extent of the disease. Because the diagnosis could not be established accurately preoperatively, a total resection of the involved thyroid lobe was done for all laterally situated solitary nodules, and excision of the isthmus with a portion of each lobe was performed for midline nodules. invasive carcinoma was suspected grossly, the diagnosis was confirmed by frozen section done on the removed lobe. In all other instances the diagnosis was made on paraffin section in 24 to 48 hours. If papillary carcinoma was found, or if lymph node invasion is present with other types of cancer, a unilateral, conventional neck dissection was performed through a single transverse incision.16 If follicular or Hurthle cell carcinoma was found in the absence of involved lymph nodes, nothing further was done. Cases of extension of tumor beyond the midline were treated by bilateral total thyroidectomy. The patients who were discovered to have carcinoma in lateral lymph nodes were treated by radical neck dissection. Hemithyroidectomy was done in the 5 patients in whom the primary tumor was found in the ipselateral lobe, and by radical neck dissection and total thyroidectomy in 2 patients - one in whom the primary was not found on exploration but was discovered on sectioning the resected

thyroid gland, and one in whom a nodule was present in both thyroid lobes, and both nodules proved to be papillary carcinomas. Four of the patients had subtotal thyroid-ectomies for multinodular goiters and small carcinomas were found in the resected specimens. No further surgery was done in these cases, In one case total thyroidectomy and bilateral neck dissection was done in one stage. The types of operations performed are shown in Table II.

TABLE II. Types of Operations Performed

Hemithyroidectomy	7
Hemithyroidectomy and unilateral radical neck dissection	28
Total thyroidectomy	4
Total thyroidectomy and unilateral radical neck dissection	6
Total thyroidectomy and bilateral radical neck dissection	1
Bilateral subtotal thyroidectomy (carcinoma incidental finding)	4
Hemithyroidectomy and partial cervical esophagectomy	1
cooping coon,	1
Total	51
I Utal	91

It is interesting to analyze the findings in the lymph nodes resected in the radical neck dissections (See Table III). 35 neck dissections were performed — 34 unilateral and one bilateral. Seven were done in patients with lateral node enlargemnts without a palpable thyroid tumor. In 5 patients a thyroid mass and lateral enlarged lymph nodes were palpable preoperatively, and in all 5 instances the nodes proved to contain thyroid cancer. In 23 cases no nodes were palpable, but because papillary carcinoma was found in

#### TABLE III. Radical Neck Dissections

Lateral nodes palpable, thyroid primary tumor	
not palpable	7
(So-called lateral aberrant thyroid cancer)	
Thyroid tumor and lateral nodes palpable	5
(Lateral nodes proved to be metastatic)	
Thyroid tumor palpable-no lateral nodes	
palpable	23
(So-called "prophylactic" neck dissection)	
Nodes positive histologically 14	
Nodes negative histologically 9	
	_
Total	35

the resected thyroid lobe a radical neck dissection was done (so-called "prophylactic" neck dissection). In 14 of these cases metastatic cancer was found in the nodes, an incidence of 61%.

#### Pathology

There is much confusion in the classification of thyroid cancer. The simplest and most practical classification is that of Warren and Meissner,17 which is as follows:

#### A. Differentiated carcinoma

- 1. Follicular carcinoma
  - a. Low grade localized carcinoma in adenoma
  - b. Follicular adenocarcinoma
- 2. Papillary carcnoma
  - a. Low grade localized carcinoma in adenoma
  - b. Papillary adenocarcinoma

#### B. Undifferentiated Carcinoma

- 1. Small cell carcinoma
- 2. Giant cell carcinoma

Many cases are mixed types. In such instances the prognosis is that of the most virulent pattern found in a particular tumor. These authors consider Hurthle cell carcinoma as variants of follicular carcinomas. In the present series of 51 cases, the distribution according to type of carcinoma was as follows: papillary carcinoma 29 cases; follicular carcinoma 10 cases; mixed papillary and follicular 8 cases; Hurthle cell carcinoma 3 cases; small cell carcinoma 1 case.

#### Results

Since the series reviewed is too recent, no long term results can be reported. During the eight years in which 51 patients were treated surgically, only three cases with primary cancer of the thyroid seen by me were not treated — two were too far advanced locally and one refused surgery. All 51 patients have been followed to date except for those who died. One patient died several hours after partial cervical esophagectomy and thyroidectomy, and represented the only postoperative mortality. There was one death due to cerebral metastasis two months after thyroidectomy and neck dissection for small cell carcinoma of the thyroid. The patient who had a thyroidectomy despite cervical spine metastasis was treated with radioactive iodine and expired two months after the operation. One patient died suddenly 7 days postpartum, presumably from a pulmonary embolus, 21/2 years after hemithyroidectomy and unilateral neck dissection for papillary carcinoma - she was free of disease on examination several weeks prior to death. Another patient died of an unrelated disease 61/2 years after hemithyroidectomy and unilateral neck dissection for papillary carcinoma. All the other patients are living and well from one month to 8 years after treatment. 10 patients in the series are living and well over 5 years since surgery.

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• The best treatment at present of infiltrating bladder cancer seems to be pelvic node dissection and cystectomy with diversion of the urinary stream by anastamosing the ureters to a short segment of ileum.

## RADICAL SURGERY AND BLADDER CANCER

EDWIN A. MEKANIK, M.D.

Tumors of the urinary bladder arise, for the most part, from their transitional epithelium and the speed of their extension is usually related to their degree of differentiation. When their anaplastic grading reaches the Grade III or IV stage, the destruction of the tumor is usually beyond local measures. Untreated, the disease pursues a vicious course with obstruction and infection of the upper urinary tract as the major cause of death. It is always present in patients with this condition even though they die of other causes. When only symptomatic measures are employed, the average survival time from first symptoms to death has been 161/2 months. With extensive infiltrating tumors it became obvious that segmental resection or cystectomy would not adequately control the disease for any acceptable time. Jewett1 noted that the curability of these tumors was greatly influenced by the degree of infiltration of the bladder wall. Obviously, with penetration of the bladder wall, metastatic disease has to be considered. Metastases to the lymph nodes at the iliac

artery bifurcations are most common. With this in mind, the extirpation of the pelvic contents came under consideration following the same train of thought as advanced for persistent cervical cancer after radiation and its failure. Pelvic exenteration led to the consideration of a bladder substitute and in April, 1950, an ileal segment was utilized by Bricker2,4 and his associates. The subsequent course of their patients indicated the superiority of the ileal bladder to the wet colostomy or the distasteful skin ureterostomies. The advantages of the short intestinal segments have been the subject of numerous investigations and the cardinal reasons for their superiority have been enunciated.

The purpose of this article is to present a follow-up of four cases in whom segments of the intestinal tract were utilized as urinary conduits.

#### Case I

A sixty-three year old white man was seen in the OPD of the Memorial Hospital

on September 16, 1952 with hematuria of eight week's duration. Cystoscopy revealed a lesion infiltrating the base of the bladder. Biopsy revealed a Grade III transitional cell carcinoma. On September 26, 1952, a pelvic node dissection, cystectomy, prostatectomy, seminal vesiculectomy, appendectomy and bilateral ureterosigmoidostomy was done. The pathology was transitional cell carcinoma, Grade III, occupying the entire trigone. On microscopic examination, infiltration into the muscle layer and right ureter had occurred.

The patient's only complication postoperatively was a thrombophlebitis from which he recovered and was discharged October 26, 1952. Recurrent episodes of hyperchloremic acidosis prompted his readmission and on February 27, 1953, he was re-explored. There was no evidence of persistent cancer so his ureterosigmoidostomy was diverted by transecting the colon above it, closing the distal segment, bringing out a colostomy and, in effect, fashioning a urinary bladder and conduit from sigmoid colon and rectum.

The patient has had subsequent admissions primarily for electrolyte disturbances, on each of which he has responded well to Sodium Lactate and Potassium Acetate medications. On June 10, 1959 the patient was alive and well.

#### Case II

A fifty-eight year old white woman was admitted to the Memorial Hospital on April 13, 1953 with gross hematuria of two weeks' duration. On April 15, 1953, cystoscopy revealed an extensive bladder tumor. Biopsy revealed epidermoid carcinoma, Grade II. On April 23, 1953, a pelvic node dissection, total histerectomy, bilateral Salpingo-oophorectomy, appendectomy, cystectomy and partial vaginectomy was done. An ileal bladder was devised and the ureters transplanted into it. The bladder specimen revealed a tumor 10cm. in diameter extending through the full thickness of the bladder wall and obstructing the left ureter. The patient's post-operative course was satisfactory and she was discharged on May 29, 1953. She has remained well, has gained weight and was contacted on June 10, 1959 at which time, as many times before, she refused to see any physicians. Blood chemistries obtained on her in late 1956 were within normal range.

#### Case III

A sixty-nine year old white man was admitted to the Memorial Hospital on June 3, 1953 for investigation of recent hematuria. Cystoscopy revealed an infiltrating carcinoma obstructing the left ureteral orifice. A biopsy was done and reported as transitional cell carcinoma, Grade III.

On June 11, 1953, a pelvic node dissection, cystectomy, prostatectomy, seminal visculectomy and appendectomy were done. An ileal bladder was fashioned with the usual ureteral anastomoses. The patient's postoperative course was smooth and he was discharged on July 7, 1953.

The patient has since had numerous surgical procedures by other surgeons none of whom has been able to demonstrate a recurrence of his previous malignancy. In June, 1959, the patient was active and well.

#### Case IV

A sixty-two year old white man was admitted with hematuria. Cystoscopy was done and revealed an extensive bladder lesion. Biopsy of this lesion revealed a transitional cell carcinoma of the bladder, Grade IV. On April 3, 1958, a pelvic node dissection, cystectomy, prostatectomy, seminal vesiculectomy and appendectomy were done. An ileal bladder was fashioned and the usual ureteral anastomoses were carried The specimen revealed, on microscopic examination, tumor extending through all coats of the bladder and into the surrounding fatty connective tissue. The patient was discharged on April 21, 1958.

Subsequently, bilateral inguinal herniae developed and with progressive symptoms arrangements were made to hospitalize the patient and repair his herniae. On Novem-

ber 27, 1958 the patient was re-admitted to the Memorial Hospital at which time it was elicited he had developed, subsequently, symptoms of incomplete, small intestinal obstruction associated with an anemia, fever and a sciatic-like pain. Intubation failed and on December 15, 1958, exploration was carried out. Lysis of a distal ileal obstruction was done, relieving the obstruction but in the retropubic space an abcess was encountered. This was traced to a perforation of the rectum. Biopsy of the abcess wall revealed transitional cell carcinoma. The patient expired five days postoperatively due to massive bleeding from a gastric ulcer.

#### COMMENT

Of the four cases presented above, only one represents a failure in the eradication of infiltrating bladder cancer by radical surgery. The ileal segments utilized have functioned well with a minimum of discomfort. One case, subsequently, had a bladder devised from sigmoid colon and, although he has had problems, has now survived almost seven years following his surgery without evidence of recurrence of

his disease. A fifth case, not presented, died of a meningitis secondary to a pyelonephritis. At autopsy, two and one-half vears after similar pelvic surgery, no evidence of persistent disease could be found although a new lesion, a carcinoma of the ascending colon was found.

Until some other means of eradicating infiltrating bladder cancer can be found. pelvic node dissection and cystectomy appears to afford the most promising results when the disease and its spread are confined to the pelvis. Anastomosing the ureters to a short ileal segment has proven to be the most satisfactory means of diverting the urinary stream.

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We all know of Dr. Spackman's intense interest in surgery for cancer. Throughout his professional career he was associated with members of the staff of the Memorial Center for Cancer and Allied Diseases in New York City. It seems significant that of the seven scientific articles contributed by his former residents in this issue, the greater proportion are directly related to surgery in the treatment of cancer.

Diseases of the colon are of distinct interest to the surgeon. They present themselves usually as disturbances in colonic function. Dolichocolon, a congenital disease associated with increased length of the colon, is somewhat rare.

#### **CONGENITAL DOLICHOCOLON**

JOSEPH P. SELTZER, M.D.

#### Differentiation a Fine Point

When the colon becomes increased both in length and calibre, then the term, 'Megacolon,' is more appropriate. Because of the large surface area of mucous membrane that results from the changes that mark the disease, there is great absorption of water. This process, in turn, results in firm and relatively dry fecal material which resists the propulsive effects of peristalsis. In sequence, constipation ensues and because of the redundant colon and the weight of its contents, volvulus becomes a strong possibility. Thus, chronic constipation is the chief complaint of the megacolon patient although in some cases there may be normal bowel function between attacks of volvulus. which occurs usually in the sigmoid. Dolichocolon associated with megacolon must be distinguished, therefore, from megacolon of other, more familiar, types.

In many cases the patient with dolichocolon will be helped by medical management but in those cases in which recurrent volvu-

James Guie Spackman, M.D., master surgeon, was keenly interested in the surgery of diseases of the large bowel. His strict adherence to the principles of preoperative care, to surgical fundamentals and to postoperative details undoubtedly helped chart the course to his outstanding success in this field. Those of us who had the privilege of training with Doctor Spackman recall his terse comments and his characteristic manner of illustrating surgical fact and principle so that neither would be forgotten. Peculiarly apt to the art of Medicine, it always has seemed to me, is a comment of the late Henry Brooks Adams: "A teacher affects eternity; he can never tell where his influence stops." Adams' remark referred, of course, both to good and bad influence and so he did not modify the noun 'teacher' by the adjective 'good' and then, again, he was not thinking of Doctor Spackman; he did not know him.



Barium study showing atonic, elongated colon (megacolon). Note long, redundant sigmoid. (Film is reversed.)

lus is a factor, resection of the redundant sigmoid is the best treatment. Sigmoid resection produces a decrease in size of the mucosal area of absorption, thus permitting of a higher water content of the stools, with resultant correction of the constipation.

Because of its diagnostic value in the type of case described in this paper, x-ray study is considered indispensable. It seems in order, therefore, to specify the various types of megacolon which, itself, is the response of the colon to chronic obstruction.

An outline of the classification of various types of megacolon follows:

1. Organic megacolon: The name given those cases in which there is a grossly demonstrable cause, e.g., pelvic tumor creating extrinsic pressure, or stenotic lesion of congenital or inflammatory nature. The treatment indicated in this type of case, that is to say, correction of the underlying pathology, is obvious.

2. Aganglionic megacolon (Hirsch-

sprung's disease): A type congenital in origin and characterized by constipation beginning at birth. Its nature and proper surgical therapy, the latter consisting of resection of the aganglionic segment of colon, have been clearly described by Swenson<sup>1</sup> and others.

Acquired aganglionic megacolon is described by Raia,² reporting from Brazil. He finds the entity quite frequent in aged individuals. It has many features in common with Hirschsprung's disease. The symptoms, however, are of a few years' duration only. Raia reports satisfactory results from the surgical treatment used by Swenson in infants and children. The etiology of the disease is believed to be on a nutritional deficiency basis.

3. Functional megacolon: The most common type and one associated with chronic constipation, with emotional disturbances a frequent accompaniment. It is plain to see that in these cases surgical treatment is unnecessary.

Dolichocolon with dilation secondary to recurring attacks of volvulus of the sigmoid colon is illustrated in the following case report. Similar cases have been reported by Lee, Bebb and Brown,<sup>3</sup> also by Sullens and Petkevich.<sup>4</sup>

#### Case Report

The patient, a 67-year-old white woman, first seen April 17, 1959, gave a history of constipation of long standing, for the relief of which she had taken laxatives, many and varied. In the past few years she had begun to have attacks of abdominal cramps, distention and nausea. The attacks usually were relieved spontaneously or by enema, the latter resulting in expulsion of large amounts of fecal material. She had consulted several physicians and had had x-rays of the large bowel a number of times. She stated that she had been told she had a large, dilated colon. Her health otherwise was good.

There was no past history of serious illness, nor of operation, nor of injury. She had had seven full-term pregnancies.

Physical examination was essentially negative except for slight distention of the abdomen and some apparent tenderness to palpation in the region of the left colon: no abdominal masses were palpable. Peristaltic sounds were normal.

The patient was admitted to the Kanawha Valley Hospital, Charleston, West Virginia, April 20, 1959.

Blood and urine examinations were within normal limits.

X-ray examination of the chest, also sigmoidoscopy, were negative. An x-ray of the colon, April 21, 1959, was reported as showing marked elongation, and dilatation throughout its entire length, with a long, redundant sigmoid loop. The colon emptied well and contracted quite satisfactorily after expulsion of the barium. The gallbladder and remainder of the gastrointestinal tract, also examined by x-ray were reported to be normal.

The diagnostic impression at this time was 'megacolon,' based on recurring volvulus of the sigmoid, which was of increased length congenitally. Resection of the redundant sigmoid colon was advised and the patient permitted to leave the hospital, to return later for surgery if she so decided.

She was readmitted to the hospital June 1, 1959, and was prepared for large bowel surgery. Enemas, cathartics and a lowresidue diet, together with the administration of Kantrex, comprised the preoperative regimen.

Operation: On June 3rd, at laparotomy through a left rectus incision, the sigmoid colon was found to be long and redundant; the mesentery of the sigmoid was narrow and somewhat thickened, with visible scarring at its root. The sigmoid itself was freely rotatable so that, when filled with fecal material, volvulus easily could occur.

Resection of the redundant sigmoid and end-to-end anastomosis were performed, with two layers of interrupted silk sutures placed just above the peritoneal reflection. The patient's postoperative course was without incident.

On pathologic examination, length of the segment of colon that was resected was reported to be 30 cm. Other than thickening of peritoneal surfaces of its mesentery, no gross nor histologic abnormality of the sigmoid was reported.

At the time of the patient's discharge from the hospital, June 14, 1959, the surgical wound was well healed and the gastrointestinal tract functioning quite satisfactorily.

Follow-Up: Close, careful follow-up in this case indicates that thus far the improvement enjoyed by the patient is sus-She reports much better bowel function.

#### Summary

A case of congenital dolichocolon with dilatation secondary to recurring sigmoid volvulus is presented. Treatment by surgical means resulted in apparent improve-Close, careful follow-up is being ment. continued.

Cases of the type presented are not common. The disease, 'megacolon,' at all times warrants extremely close observation and study so that differentiation between its various types can be made, for the purpose of selective treatment.

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#### ANNUAL MEETING, Medical Society of Delaware Rehoboth, Delaware September 8, 9, 10, 1960

 The author presents a detailed account of recurrent epidermoid carcinoma in a 35 year old patient, five and one half months pregnant at the time of the first radical resection.

## RECURRENT EPIDERMOID CARCINOMA OF THE TONSILLAR FOSSA

ROBERT A. MINO, M.D.

Epidermoid carcinoma of the tonsil is the second most common form of malignant neoplasm of the upper air passage, superseded only by carcinoma of the laryngopharynx. It accounts for 1.5 to 3 per cent of all forms of carcinoma. These carcinomas are most frequently observed in the sixth and seventh decades of life. In a series of 139 cases Perussia found that 90% (125 cases) occurred in men. In contrast, one-third of lymphoepitheliomas and lymphosarcomas are found in women. In the third and fourth decades of life lymphosarcomas are more common than carcinomas.

Carcinomas of the tonsil are commonly exophytic, superficially ulcerated tumors which usually arise from the upper pole. Spread to the solft palate often occurs at the level of the supra-tonsillar fossa and extension to the anterior tonsillar pillar is frequently seen. Invasion of the glossopharyngeal sulcus is common and in the more advanced cases, the base of the tongue is frequently involved. The posterior tonsillar pillar is seldom invaded.

Since a great portion of the tumors are rather undifferentiated epidermoid carcinomas, metastasis to an upper cervical node is usually present.

The embryonal character of a great many of these carcinomas accounts for their great radiosensitivity. Various reports indicate a five year cure rate varying from 17 to 30 per cent following roentgentherapy. Failure following therapy is occasionally due to lack of sterilization of the primary lesion, but in most cases the treatment fails because of subsequent metastasis to the neck and generalization of the disease.

Evaluation of the course, treatment and prognosis of carcinomas arising from the tonsillar fossa from which the tonsils have been removed many years previously is not possible since most of the published reports fail to make a distinction between tumors of tonsillar origin and those arising from the mucous membrane of the fossa.

#### CASE REPORT

The patient, a 35 year old pregnant white woman was admitted to the Protestant Deaconess Hospital, Evansville, Indiana on



Fig. 1. This shows a front view of patient, the oldest boy who was born  $3\frac{1}{2}$  months after radical resection and the second boy who was born in March 1959. Practically no deformity of the face is noted in this view. Photograph taken 6 years and 8 months following operation.

12-1-52 with recurrent carcinoma of the right tonsillar fossa with extension to the base of the tongue, anterior and posterior tonsillar pillars and adjacent soft palate, and was discharged 12-22-52.

Summary of past medical history: On 12-17-51 the patient was seen by Dr. Victor H. Mino with an upper respiratory tract infection of one week's duration. In addition to the presence of a moderate pharyngitis, a 2 cm. superficially ulcerated mass, which was thought to be a carcinoma, was also noted. The tonsils had been removed fifteen years previously. Examination failed to reveal any other significant findings, and in particular there were no palpably enlarged cervical lymph nodes. Examination of the chest by x-ray on 12-24-51 failed to reveal any significant abnormalities. It is interesting to note that her maternal grandmother had a "cancer of the throat" which caused her death at the age of 32 years, and a maternal uncle died at the age of 40 years from a "cancer of the upper air passage." On 12-19-51 she returned to the

office and a biopsy was obtained of the lesion in the tonsillar region. Microscopic examination of the excised tissue\* revealed a very undifferentiated epidermoid carcinoma of the tonsillar region.

During the interval of 12-28-51 through 2-11-52 she was given irradiation to the lesion\*\* by direct contact (50 kv, 1 mm, al. filtration, 2700r measured in air x 3 for a total dose of 8100r) and through two lateral 8 x 12 cm. neck fields (250 kv, ½ mm. cu. filtration, 50 cm. target-skin distance, for a total dose of 2700r measured in air to each lateral field). Due to incomplete regression of the tumor, the patient was given an additional 3200r measured in air (250 kv, 1/2 mm. cu. filtration, 50 cm. targetskin distance) utilizing two lateral 4 x 4 cm. fields during the interval between 3-25-52 through 4-2-52, and 4000r measured in air by direct contact (50 kv, no filtration) on 5-12-52. Approximately two months following completion of therapy, the patient began to notice a gradual "return" of the previously treated lesion and

<sup>\*\*</sup>By Arthur A. Hobbs, Jr., M. D., Radiologist, Protestant Deaconess Hospital, Evansville, Indiana.

<sup>\*</sup>By Fred E. Mills, M. D., Pathologist, Protestant Deaconess Hospital, Evansville, Indiana.

she returned to consult Dr. Victor H. Mino and Dr. Raymond W. Mino on 11-3-52. My first contact with this patient occurred at this time. Examination revealed the presence of an indurated 2 cm. mass beneath the mucous membrane in the right tonsillar fossa which invaded the right side of the base of the tongue and the anterior and posterior tonsillar pillars. There was a separate 3/4 cm. submucosal mass in the supra-tonsillar fossa with beginning extension onto the adjacent soft palate. At this time the patient was at 41/2 months' gestation, this being her first pregnancy. On 11-9-52 the patient was admitted to the Protestant Deaconess Hospital, Evansville, Indiana, and on 11-10-52 I obtained biopsy of the lesion under general anesthesia. Microscopic examination of the excised tissue confirmed the clinical diagnosis of recurrent carcinoma and the patient was discharged from the hospital on 11-16-52.

#### Patient Reassured Of Risk

The patient and her husband were given a detailed account of the proposed surgical procedure necessary to extripate the recurrent disease. Since the patient was in the course of her first pregnancy and only approximately four months from term, she was somewhat apprehensive and feared that the surgery might result in miscarriage. After being assured that there was little risk of premature labor, during or after surgery, she consented to the proposed operation.

The patient was re-admitted to the Protestant Deaconess Hospital on 12-1-52. Complete examination revealed the patient to be 5½ months pregnant and the fetus was viable. The recurrent tumor in the right tonsillar fossa showed only a very slight increase in size as compared with the dimensions at the time of the biopsy on 11-10-52. There were no palpably enlarged cervical lymph nodes. X-ray examination of the chest showed no abnormal findings. There was a moderate anemia which was corrected by four transfusions of blood, 500 cc. each, so as to restore her

red blood cell count to normal prior to the operation.

#### First Operation

On 12-4-52 the patient was subjected to an operation by the author. A tracheostomy was performed and a Martin #6 tracheostomy tube inserted. This was then connected to the anesthetic machine by a Schweizer tube and anesthesia continued. An en bloc right radical neck dissection, with resection of the right one-half of the mandible, floor of the mouth, base of the tongue, tonsillar fossa and the anterior and posterior tonsillar pillars including the adjacent soft palate and lateral pharyngeal wall, the pterygoid contents and the lower portion of the parotid gland, was performed. A flap of buccal mucosa with the attached underlying muscle, immediately below and posterior to the right parotid duct, was mobilized, leaving it attached superiorly. The remaining posterior pharyngeal wall was mobilized so as to allow it to shift toward the right side. The buccal flap was rotated posteriorly and sutured to the mobilized posterior pharyngeal wall resulting in closure of the operative defect and reconstruction of a new right lateral pharyngeal wall The defect resulting following removal of a portion of the soft palate was closed by approximately the anterior and posterior mucous membranes. The mucous membrane of the tongue and the floor of the mouth was sutured to the buccal mucosa and the divided lip reconstructed in the usual manner. The suture line along the floor of the mouth and the reconstructed pharyngeal wall was re-enforced by approximating the external flap to this suture line. The closure of the external wound was then completed. The tracheostomy tube was anchored in place with silk sutures. A #14 French catheter was placed through the left nostril into the esophagus for tube feeding. During the course of the 11½ hour operative procedure, 4,000 c.c. of blood and 2,500 c.c. of 5% glucose in water were administered intravenously. The patient tolerated the operative procedure extremely well and concluded

the operation with a blood pressure of 108/70 with a pulse rate of 84 per minute. The blood pressure prior to the operation was 95/60 (the patient has been a hypotensive for years) and the pulse rate was 88 per minute.

#### Results Of Pathological Examination

Pathological examination of the excised surgical specimen (Surgical #12-3093-52) revealed a recurrent or residual carcinoma of the tonsillar area with extension to the structures previously described. The surrounding tissues showed considerable fibrosis as the result of previous x-ray therapy. The lymph nodes revealed a moderate degree of fibrosis without tumor involvement. Microscopic examination revealed the tumor was similar in appearance to that noted in the preoperative biopsy and to the original biopsy specimen obtained 12-19-52.

Ambulation was started on the first postoperative day and the postoperative course was uneventful. At the time of discharge from the hospital on 12-22-52, eighteen days postoperatively, the external and internal wounds were completely healed except for a 4 mm. area of granulation tissue at the posterior border of the superior alveolus. There had been no interference with the pregnancy.

Following discharge from the hospital, the patient resumed her usual activities as a housewife. Irrigation of the mouth and pharynx as well as changing of the tracheostomy tube were carried out daily. She was allowed to swallow clear liquids, but solid foods were converted into a liquid by the use of a Waring blender and these were then taken by nasal tube which the patient inserted. Antibiotics were administered in order to prevent infection and appropriate analgesics completely controlled the discomfort in the pharynx and neck.

#### Complications

In the subsequent course of this patient a number of undesirable late complications occurred as a result of the previous irradi-

ation. On 12-29-52 the patient accidently fell out of bed striking the mid-point of her external scar and tearing it open so as to expose the carotid bulb and a 3 cm. surrounding area. The patient failed to inform me of this occurrence until twentyfour hours later. This area had previously received heavy irradiation in the treatment of her original carcinoma causing interference with the healing process. The opened wound already showed signs of beginning infection. Parenteral antibiotics, which the patient was already receiving, were doubled in amount and topical Varidase was applied to the wound and the infection slowly improved. One week later the stump of the excised carotid artery, which had previously been subjected to heavy irradiation, began to bleed slightly, necessitating a secondary ligation of the stump. On 1-17-53 the wound appeared clean; however, the external carotid artery stump again required ligation because of recurrent bleeding. In order to promote healing of the external carotid artery stump, a new source of blood supply was obtained by placing a pedicle graft (skin and fat) taken from the normal tissues of the neck and suturing this into the defect over the carotid vessels and a compression dressing applied. The wound healed without incident.

The granular area posterior to the superior alveolus continued to heal very slowly since this area had also received heavy irradiation.

#### Birth Of First Child

On 3-13-53, approximately  $3\frac{1}{2}$  months after the operation, the patient delivered a full term, perfectly normal baby boy without difficulty.

On 3-29-53 the wound posterior to the superior alveolus was completely healed and the tracheostomy tube was removed. The patient was allowed to take a liberal diet with the omission of rough foods. Swallowing was normal, regurgitation of food through the nostrils did not occur and there was no trismus. She still required medication for the control of pain in her shoulder and neck. There was no evidence



Fig. 2. Right lateral view with the hair pulled back behind the ear. Notice the obvious depression caused by surgical absence of the right side of the mandible and by loss of tissue resulting from the right radical neck dissection. Atrophy and scattered pigmentation of the skin with telengectasia are the late results of the previous irradiation. This area is not usually visible since the patient's hair covers most of the defect.

of recurrent or metastatic disease. Because of the reduced resistance of the tissues, which had been heavily irradiated, daily irrigations of the mouth and pharynx were continued. In May 1953 a small area of radionecrosis appeared in the right pharyngeal wall just above the pyriform sinus which finally healed by the later part of August 1953.

#### **Onset Of Paralysis**

In November 1953, during a follow-up examination, the patient suddenly developed paralysis of the entire left side of the body. Apparently this was due to a small embolus from the very short external caro-

tid artery stump since the symptoms appeared immediately following gentle palpation of the carotid bulb. One minute later the patient was given Papaverine intravenously with almost immediate disappearance of the paralysis. Three and one-half hours later the paralysis returned and was again relieved by the same intravenous medication. An hour later Paveril was given by mouth and continued at intervals of four hours for the succeding two months. There has been no further episodes of paralysis and no evidence of neurological disturbances.

In December 1953 late radionecrotic ulcerations began to appear on the left pharyngeal wall. The process continued for approximately three years. Large doses of antibiotics were administered to control infection and the pharynx was kept clean by daily irrigations. Nasal tube feedings were utilized except for the ingestion of liquids. The pharynx has remained healed for the last three years. Since that time irrigation of the pharynx has been performed by the patient's husband each day.

#### Second Pregnancy

Although the patient desired another child, pregnancy was discouraged until sufficient time had elapsed so as to make recurrence of the tumor a remote possibility. On 3-2-59 the patient delivered another perfectly healthy baby boy.

In spite of the excellent oral hygiene, the patient developed dental caries of the type typically seen following irradiation of the oral cavity or pharynx; consequently, all teeth were extracted except for three in the lower left alveolus. In September 1958 the upper jaw was fitted with a set of false teeth and a removable lower plate was made, extending to the right side, in order to fill in the space left by the jaw resection, and attaching to the three remaining teeth.

At the present time, over 7 years following the radical resection, the patient shows no evidence of her original disease. Swallowing is accomplished normally and there is no regurgitation of food through the nose.

The remaining lower jaw functions normally and trismus is absent. Her speech is unimpaired.

Photographs (Figs. 1, 2 and 3) of the patient and her children were taken in August 1959, 6 years and 8 months following radical resection of the recurrent carcinoma of the right tonsillar fossa and adjacent structures. Front view of the patient shows almost no visible deformity. The left lateral view shows only changes in the skin produced by the previous irradiation. The right lateral view shows a depression caused by surgical absence of this side of the jaw and flattening produced by the right radical neck dissection. Skin changes produced by the previous irradiation are also visible. The hair is ordinarily worn so as to cover the surgical defect and the skin changes. The oldest child, who is a perfectly healthy, intelligent boy, was born in March, 1953, 31/2 months after the radical resection. The youngest child, who is obviously a beautiful baby, was born in March, 1959, almost 6 years after the birth of the first child.

#### DISCUSSION

In the patient presented in this report, a primary undifferentiated epidermoid carcinoma was discovered in the right tonsillar fossa fifteen years after previous surgical removal of the tonsils. In view of this information and also since examination failed to reveal the presence of tonsillar tissue in the left fossa, it was assumed that the carcinoma in the right side originated from the mucous membrane of the tonsillar fossa although it was fully appreciated that the neoplasm might possibly have developed from a small tonsillar remnant.

In reviewing the family history, the previous occurrence of certain cancers appears to be of some significance. Heredity, as a possible factor in the genesis of this patient's carcinoma, deserves some consideration in view of the fact that her maternal grandmother had a "cancer of the throat" which caused her death at the age of 32 years and a maternal uncle died at the



Fig.3. Left lateral view with the hair pulled back behind the ear. Atrophy of the skin, scattered pigmentation and telengectasia roughly outline the area previously irradiated. These changes are usually not seen since the patient wears her hair so as to cover this area.

age of 40 years from a "cancer of the upper air passage."

In the treatment of cancer of the tonsillar region irradiation is still the method commonly employed. When roentgenotherapy is employed in a sufficient quantity to achieve an expected eradication of the cancer, permanent damage to the surrounding structures often results in a high incidence of late radionecrosis and subsequent operation to remove residual tumor, when irradiation has failed, is much more difficult, fraught with many complications and incapable of giving as high a cure rate as primary surgical removal.

In the past decade, an increasing number of surgical attempts have been made in removing not only the recurrent lesions but also the primary tumors located in the tonsillar region. Ward, Edgerton, Chambers and McKee3 recently reported a series of 553 patients with carcinoma of the oral cavity (floor of mouth, with or without mandibular involvement, tongue, gum, buccal region, palate, tonsillar fossa and etc.) treated at the Johns Hopkins Hospital between January 1946 and January 1958. Four hundred and fifty three of these patients were treated by the composite operation (en bloc or in-continuity radical resection of the cancer with radical neck dissection) with an over-all mortality of 3.9%. Forty-seven per cent (47%) of the total patients had a history of x-ray failure with obvious recurrence prior to operation. Three hundred and seventeen patients were operated upon over five years ago. Of the two hundred and seventy-three determinate patients in this group 40% (one hundred and eight) are living and well without recurrence five years following operation.

The great advances and the safety and success of present-day radical surgery are dependent upon the contributions of a number of factors. Numerous publications have stressed the advances in anesthesiology, antibiotic therapy, preoperative, operative and postoperative fluid and electrolyte therapy, plasma and blood transfusions, etc. The author has previously stressed the dominant role of massive blood transfusions in the maintenance of a stable course during the performance of extensive surgical procedures.

As might be expected, the presence of the pregnancy in association with the recurrent carcinoma was the source of considerable concern to the patient. She feared that surgery might induce premature labor or adversely affect the fetus so as to result in the birth of an imperfect baby. That the patient should entertain these misgivings is not surprising since similar expressions were made by several physicians who were not familiar with the stable course maintained throughout the long operative procedure and in the subsequent postoperative period by individuals subjected to radical extripation of cancers in the head and neck.

That the gestation proceeded smoothly and terminated at the expected date with the normal delivery of a perfect baby boy is due to the maintenance of a relatively constant environment for the fetus, particularly during the preoperative, operative, postoperative and subsequent course of the mother. A brief discussion of the factors contributing to the maintenance of this relatively constant environment for the fetus deserves further consideration.

Following conception, the gestation proceeded normally and the general health of the mother was good. After biopsy of the recurrent cancer on 11-10-52 the dysphagia which occurred was controlled by appropriate analgesics and the nutrition adequately maintained by nasal tube feedings so that when she again entered the hospital on 12-1-52 her physical condition was found to be excellent except for the presence of a moderate anemia which was corrected by blood transfusions prior to surgery.

During the course of the long (111/2) hours) and extensive operative procedure on 12-4-52, the patient maintained a stable course with insignificant fluctuations in the blood pressure and pulse rate and concluded the operation with a blood pressure of 108/70 and a pluse rate of 84 per minute. The blood pressure prior to the operation was 95/60 (the patient has exhibited asymptomatic hypotension for many years) and the pulse rate was 88 per minute. The slight increase in the blood pressure noted at the conclusion of the operation is temporary in nature and occurs following ligation of the internal jugular vein. The stable course throughout the operative procedure permitted a constant environment for the fetus and was made possible by the carefully controlled anesthesia and by continuous replacement of blood (4000 cc.). Since deep levels of anesthesia are not necessary in head and neck surgery, equal proportions of nitrous oxide and oxygen with the continuous infusion of small amounts of sodium pentothal provided adequate anesthesia and assured a sufficient concentration of oxygen throughout the

operation. The administration of the anesthetic agent through a tracheostomy permitted an unobstructed airway and facilitated the conduct of the operation within and adjacent to the pharynx.

The uneventful postoperative course in the hospital and in the subsequent period at home, except for the accidental injury that resulted in exposure of the carotid vessels but which was managed with minimal disturbance to the patient, permitted the gestation to proceed normally and terminate on the expected date in the normal delivery of a perfect baby boy.

In order to achieve an expected eradication of the primary cancer in the tonsillar region it was necessary to administer what was considered to be a sufficient quantity of irradiation. In spite of the heavy amount of roentgentherapy, complete destruction of the cancer did not occur and unfortunately the surrounding tissues were permanently damaged, subsequently resulting in a number of serious late complications.

The first complication related to her previous irradiation occurred on 12-29-52, twenty-five days after operation. healed incisional scar in the skin flap, just above the level of the carotid bulb, was torn open in such a manner as to expose the carotid bulb and external carotid artery stump by striking the corner of a night stand during an accidental fall from the bed. Previous irradiation to this portion of the skin flap interfered with normal healing of the incision to such an extent that the incisional scar was disrupted by the relatively weak blow incurred in the fall. A serious problem was created by this uncovering of the previously irradiated external carotid artery stump since firm healing of this ligated structure was partially dependent upon the blood supply provided by the overlying skin flap; disruption removed this necessary blood supply. Since the patient failed to inform me of the occurance of the disruption until 24 hours later, the rapid spread of infection, in this area of reduced resistance, prevented immediate closure of the wound. In addition

to the large doses of parenteral antibiotics. topical antibiotics, alternating with topical varidase, were applied to the open wound and the infection slowly subsided. week later, the stump of the external carotid artery began to bleed slightly, necessitating a secondary ligation of the stump. 1-17-53 ligation was again required to control recurrent bleeding. Since the wound appeared fairly clean and since there was danger of a "blow-out" of the external carotid artery stump, a new source of blood supply was obtained by immediately placing a pedicle flap of skin and fat, taken from from the normal tissues of the neck, and suturing this into the defect over the carotid vessels and maintained in place by a special type of compression apparatus. Healing of the wound occurred without incident.

The sudden development of paralysis of the left side of the body in November of 1953 was not unexpected since it was assumed that some dilitation, even if only minimal, would occur following the secondary healing of the external carotid artery stump. Embolization of a small clot, which had formed in the dilitation, apparently occurred following gentle palpation of this area and resulted in the paralysis. Since this event had been anticipated, Papaverine, which had been kept constantly available, was quickly given to the patient intravenously and the paralysis immediately disappeared. Continued freedom from paralysis was obtained by the administration of oral Paveril for the next two months. At the present time, the patient shows no evidence of neurological disturbances.

The management of late radionecrosis of the pharynx is tedious and time consuming and too often is neglected in many patients. No effort should be spared in the care of this serious complication, since failure to do so not only increases morbidity and suffering but often results in the patient's death. The oral cavity and pharynx must be kept clean by daily irrigations, which removes exudates, necrotic tissue and food particles, thereby reducing bacterial con-

#### DELAWARE MEDICAL JOURNAL

tamination to a minimum. Antibiotics, at times in very large doses, are utilized and the antibiotic agent is changed at intervals in order to prevent the development of resistant organisms. Adequate nutrition must be maintained and, if necessary, taken by means of a nasal tube, which the patient An ordinary food blender will readily convert solid food into a liquid, which can then be taken by nasal tube.

When radionecrosis exists, pain is often severe and may make the patient's life so miserable as to lead to self-destruction. With rare exception, this suffering need not occur since the administration of appropriate analgesics, tranquilizers, sedatives, etc., will usually control the patient's symptoms.

Following radical resection of the carcinoma, reconstruction of a new pharyngeal wall was accomplished by utilization of tissue obtained from a buccal flap and by mobilization and shifting of the remaining posterior pharyngeal wall. Complete anatomical and functional restoration was obtained. Swallowing, speech and tongue motion are not impaired and trismus is absent. The chin contour is not significantly altered since the jaw was divided slightly to the right of the midline in order to preserve the width of the chin. Since September 1958 the patient has utilized a set of dentures, the lower plate being attached to the three remaining teeth.

Over seven years have elapsed since the radical resection of the recurrent carcinoma, and the patient shows no evidence of her original disease.

#### Conclusions and Summary

- 1. A case of recurrent carcinoma of the right tonsillar fossa, invading the base of the tongue, anterior and posterior, tonsillar pillars, soft palate, etc., occurring in a 35-year-old pregnant white woman, is reported.
- 2. Radical resection of the carcinoma in continuity with radical neck dissection was performed without adversely affecting the pregnancy by the maintenance

- of a relatively constant environment for the fetus.
- 3. The factors responsible for the maintenance of the relatively constant environment for the fetus are briefly discussed and the dominant role contributed by the replacement of large quantities of blood stressed.
- 4. The patient gave birth to her first child 31/2 months after the operation for cancer and the second child was born approximately 6 years after the first child. Both deliveries were normal and the children are beautiful, healthy and intelligent.
- 5. The method utilized in reconstruction of a new lateral pharyngeal wall is reported.
- 6. An account is given of the occurence and management of the late complications of roentgentherapy.
- 7. It appears that radical surgical resection. in continuity with radical neck dissection, offers a better outlook for the patient with cancer than any other method employed.
- 8. The patient shows no evidence of her original disease, over seven years following operation. The cosmetic appearance is quite good. Swallowing, speech and tongue motion are normal and there is no trismus.

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Hermaphroditsm and pseudohermaphroditsm are conditions in which early diagnosis and treatment are essential to avoid malignant degeneration and to allow the child some chance toward normal pyschic development.

#### HERMAPHRODITISM AND

#### **PSEUDOHERMAPHRODITISM**

Case Reports

JOHN F. KUSTRUP, M.D.

True hermaphrodites are individuals who have histologically proven gonads of both sexes. At operation these may be found as separate and distinct ovaries and testes or the same gonad may contain both ovarian and testicular tissue. The general appearance of the individual may vary from typically male to female.

Pseudohermaphrodites are individuals who have gonads of one sex but secondary sex characteristics and external genitalia presenting the appearance of the opposite sex. Therefore, the gonads of the male pseudohermaphrodite are histologically testes and the general appearance of the individual is feminine. The gonads of the female pseudohermaphrodite are histologically ovarian but the external genitals and secondary sex characteristics are masculine. This condition occurs because of a concomitant hyperplasia of the adrenal cortex.

When malignant change takes place in the gonads of the hermaphrodite, the tumor is often a dysgerminoma. Histologically, this closely resembles a seminoma of the testis.

In case No. 1, a true hermaphrodite, the habitus was a typically male. Diagnosis of a congenital abnormality was made early in life but an attempt to correct this abnormality was blocked by his parents. Medical examination was avoided until the twenty fourth year of life when a dysgerminoma developed and the diagnosis of true hermaphroditism was surgically and histologically proven.

In case No. 2, a male pseudohermaphrodite with the general appearance and external genitalia of a female, the diagnosis was made early. Bilateral orchiectomy was performed to avoid the possibility of malignant degeneration and to allow her to continue life as a female.

#### Case No. 1

Case No. 1 was a twenty-four year old white male who was admitted to St. Francis Hospital on May 27, 1955 complaining of abdominal pain and abdominal distention.

His provisional diagnosis was ascites due to cirrhosis of the liver. His past history revealed no serious illnesses. At the age of 5 or 6 years, after being admitted to school, he told his teacher that he was not like other boys and was not quite sure to which toilet he should go. He was referred to his family physician who advised that he be examined by a specialist but the child's parents prohibited any further examination or treatment. His family history was irrelevant. History of present illness: In the two weeks prior to admission, he complained of epistaxis, back pain, abdominal swelling, and lower right abdominal pain. His system review was entirely negative except for the fact that he sat down to urinate.

His general appearance was that of a well developed white man, six feet tall weighing 160 pounds. His face contained a heavy growth of beard. The skin of his anterior chest and shoulders was covered with hair. His abdomen was distended with prominent veins, a fluid wave, dullness on percussion, and a palpable mass in the lower right quadrant. His penis was 4 cm. long and 1.75 cm. in diameter with scrotal hypospadias or it could have represented a hypertrophic clitoris with urethra below it. There was no testicle found on the left side and the mass in his right inguinal region was assumed to be a testicle with incarcerated omentum. The folds below the urethra could have been scrotum or labia majora, small labia minora and a shallow vagina. The remainder of his physical examination was entirely negative.

Eight and one half liters of blood tinged fluid were obtained by abdominal paracentesis. This fluid was negative for tumor cells. After aspiration, the mass in the right inquinal region became more prominent and measured 4 x 5 cm. It was neither tender nor translucent and was firm and extended along the course of the inquinal canal toward the scrotum or labia.

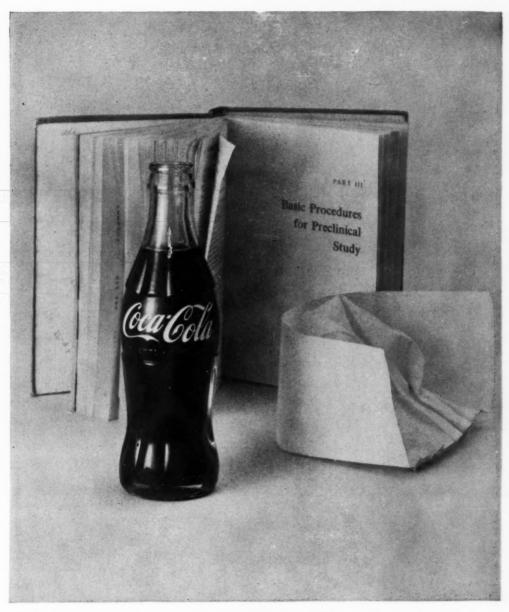
Complete blood count, hematocrit, blood sugar, urinalysis, blood serology, and chest x-ray were all normal. His serum bilirubin

was 0.5 mg., his immediate direct Vandenbergh was negative. The first serum amylase was reported at 310 units; a recheck was 70 units. Cephalin fluocculation was negative in 48 hours. X-ray of the lumbar spine and pelvis was negative for bony pathology.

#### Diagnoses

On the basis of the above data, the following diagnoses were made: Right indirect inguinal hernia with undecended testis and incarcerated omentum. Pelvic mass—either teratoma of undescended testis or carcinoma of ovaries. Pseudohermaphrodite. Ascites,

On June 1, 1955 the patient was operated upon with exploration of the right inguinal region thru the usual hernioplasty approach and a midline incision suprapubically for exploration of the abdomen. Findings are as follows: In right inguinal canal—a right indirect inguinal hernia with incarcerated omentum was found. Through this internal ring, 5000 cc. fluid was aspirated and a large mass palpated in pelvis and abdomen. No gonad was found. The mass in the pelvis was diffuse encapsulated except at a point where it had ruptured its capsule and extruded its contents into the abdominal cavity. It had the consistency and gross appearance of placental tissue and was equivalent in size to 3 or 4 large placentae. It was adherent to the rectum and sigmoid colon posteriorly and on the left and buried the cecum and appendix on the right. Because of its friability it was scooped out by the handful with considerable hemorrhage but less than anticipated for a tumor of this character. With the mass cleaned out, a small uterus about the size of a 12 year old, was found. The broad and round ligaments were well developed. No left tube or ovary was found as such and was assumed to have been removed with the mass. The right tube was well developed. The right ovary was atrophic measuring 1.1 x 0.4 x 0.4 cm. Enlarged lymph nodes were palpable along the aorta. The liver was not enlarged and was of normal consistency. Biopsy done

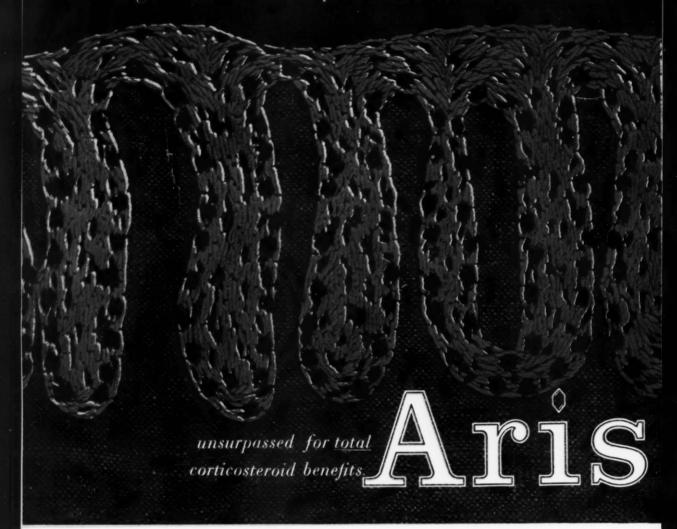


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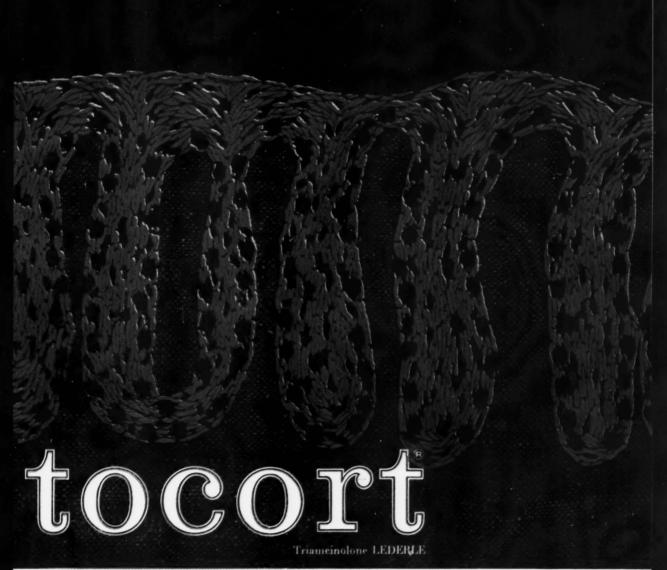


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with a Silverman needle. Gall bladder was normal. Kidneys were not enlarged and were of normal consistency. Examination of the external genitalia under anesthesia confirmed the findings previously reported.

In summary, therefore, the operation consisted of a right inguinal hernioplasty, abdominal exploration with removal of pelvic mass, bilateral salpingoopharectomy, and biopsy of liver.

Pathological examination of the tissues showed a degenerated hemorrhagic tumor of the ovary (dysgerminoma), poorly developed Fallopian tube, remnants of ovarian tissue, omental tissue with hemorrhage and ischemia, and normal liver.

The patient had an uneventful convalesence from the operation and was discharged from the hospital on June 10th. After discharge from the hospital he was given deep x-ray therapy. On December 31, 1955 he was readmitted to the hospital with generalized pain, nausea, vomiting, mental confusion, convulsions, and temporary blindness. His blood pressure was 196/150.

The nausea and vomiting were controlled by thorazine and his general condition improved after the intravenous administration of nitrogen mustard. There was no evidence of a focal brain lesion and it was felt that bilateral papilledema was due to renal rather than cerebral damage. An important finding was a mass in the left inguinal canal similar to that originally found on the right side. On January 16, 1956 the patient's condition had improved to the point that it was possible to explore his left inguinal canal. This was done and the mass was found to be due to a left indirect inguinal hernia with incarceration of omentum and a left undecended testicle with tumor of the testis. Left inguinal hernioplasty and left orchiectomy was performed and examination showed the type of cell in this tumor seen in seminoma of the testicle and dysgerminoma of the ovary. In view of the presence of testicular tissue in this section, it can now be definitely stated that the patient is a true hermaphrodite.

The patient's recovery from this operation was uneventful until he again develop hypertension of 190/140 with mental confusion. This again improved following the intravenous use of nitrogen mustard. One month later he had a recurrance of ascites and disturbance of vision and again he responded favorably to intravenous and intraperitoneal nitrogen mustard. His final hospital admission was from March 26 until April 27, 1956 on which day he expired.

The positive findings of the autopsy showed a small metastatic neoplasm of his right lung with pulmonary edema, generalized peritoneal extension of a primary dysgerminoma of pelvis with ascites, and metastatic neoplasm of the liver with esophageal varices and hemorrhage. The right kidney showed compression due to the huge tumor.

#### Case No. 2

Case No. 2 was a sixteen months old white female admitted to the hospital on September 25, 1958 because the parents had noticed a lump in her left inguinal region a few months prior to admission. The lump had disappeared after it was first noticed but recurred when she started walking. The past history was entirely negative, the birth weight being 5 pounds 13 ounces. The family history was entirely negative.

Physical examination was entirely normal except for a mass present in the left inguinal region at the level of the internal ring when the child walked or cried. The external genitalia appeared to be entirely normal. The pre-operative diagnosis was left congenital inguinal hernia.

On September 26th a hernioplasty was performed and a gonad was found in the sac at the internal ring. Thru this opening one could not identify a uterus, tubes or ovaries and the gonad appeared to arise from the lateral abdominal wall. Biopsy was performed, the gonad returned to the

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abdominal cavity and hernioplasty completed.

Microscopic examination of the material obtained at biopsy showed tissue covered by a wide capsule of compact fibrous tissue within which was seen an occasional capillary and a few lymphocytic cells. Immediately beneath this capsule and subdivided into smaller lobulated areas by septa which extended down from the capsule were large groups of minute nests of cells which resembled miniature testicular tubules. Under high power, these cells had all of the characteristics of immature testicular tubules, the cells resembling to some degree immature Sertoli cells. The cells stained rather deeply and had a scanty amount of cytoplasm, the nuclei appearing to be oval. The tubules were surrounded by basement membrane but the central portion of the tubules showed no change such as that usually seen in the adult form. The pathological diagnosis was immature testicular tissue.

Exploratory operation of the abdomen

was performed on December 15 and biopsy of the right gonad revealed the same findings as reported for the left. On each side of the abdomen one could see a well developed spermatic cord extending to the internal ring at which site testis and epididymi were found. A peritoneal band extended from one internal ring to the other. Uterus, cervix, ovaries and fallopian tubes were not present. A bilateral orchiectomy was performed and the infant was discharged from the hospital following an uneventful convalesence. Diagnosis: Pseudohermaphrodite (male).

#### Conclusions

These cases emphasize the need for early diagnosis and treatment in order to avoid possibility of malignant change and to permit these individuals to follow a normal psychosexual pattern.

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View of Operating Room — Spackman Surgical Wing, Memorial Hospital, Wilmington, Delaware

# AN UNUSUAL COMPLICATION FOLLOWING AORTOGRAM

DAVIS A. BALTZ, M.D.

Everyone who was one of his residents remembers much of Doctor Spackman to call truly admirable. To me he was the wisest and most inspiring teacher when, with the unfailing generosity of his time, he shared the problems and pitfalls of the surgical road—and the insights to be gained therefrom—through his own misadventures there.

In his memory I cite the following case.

J. B., a 67 year old white man, was referred for surgical evaluation because of progressive intermittent claudication of the entire right lower extremity and buttock for one year. The pain became incapacitating after one-half block of brisk walking and was relieved by an adequate period of rest. His past medical and family history was not significant.

Examination revealed a B.P. 130/80. The heart and lungs were not remarkable. Chest x-ray and electro-cardiogram were not significant. The abdomen was negative and the distal aorta was normal and easily palpated. The right femoral pulse was barely palpable; the remaining pulses in the right lower extremity were absent. All pulses in the left lower extremity were normal. There was definite blanching of the right foot on elevation.

The patient was advised to have a diagnostic aortogram and this was carried out

under general anesthesia. Twenty cc. of 70% Urokon were rapidly injected into the aorta and films were taken. Because the x-rays were not satisfactory—the timing had apparently been inaccurate—another needle was inserted into the aorta and again 20 cc. of 70% Urokon were injected. An excellent aortogram resulted and indicated an almost complete occlusion of the right iliac artery just distal to the bifurcation of the aorta. Also, the inferior mesenteric artery and all its branches were outlined with unusual clarity. Another film taken ten minutes later showed a clear outline of both kidneys and also a remarkably clear outline of the left colon.

The patient was not discharged the following day because of minimal abdominal distention and mild gas pains. The bowel sounds were normal; the abdomen was not tender; the WBC was 5,500 with a normal differential; the Hgb. was 13 gms.; and his temperature was normal. It was felt the patient was suffering a mild ileus secondary to some retro-peritoneal irritation.

In the afternoon of the second postaortogram day, abdominal pain and distention became definite and progressed rapidly to an extreme degree. Definite acute tenderness and muscle guarding developed which were most marked in the left lower quadrant. The pulse became rapid and weak; the B.P. dropped to 90/60;

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Hgb. was 14 gms.; WBC was 12,000 with 41 stabs and 37 PMN's. His condition worsened rapidly with the B.P. falling to 60 systolic. Intravenous fluids with levophed, gastric suction, and oxygen were started. An electro-cardiogram was not significant and the patient was taken to the operating room with the diagnosis of thrombosis of the inferior mesenteric artery.

The entire left colon was found to be gangrenous. There were, however, several small oval areas measuring 3 to 8 cm. in diameter which were viable; and closer inspection revealed that the main trunk and the major branches of the inferior mesenteric artery were pulsating normally.

The large bowel was resected from the left transverse colon to the rectum and a transverse end colostomy was established. The patient withstood the procedure poorly and in spite of massive supportive therapy, including intravenous cortisone and levophed, expired approximately twenty-four hours later.

The autopsy revealed ulcerative athero-

sclerosis of the aorta, coronary sclerosis and stenosis of the left anterior descending branch, atherosclerosis and almost complete block of the right iliac artery. There was also evidence of adrenal exhaustion, pulmonary congestion and edema, and cardiac hypertrophy.

It is our belief that the gangrenous changes described in the left colon were due to some irritative phenonomenon secondary to the dye injected into the aorta. As a result of this disastrous series of events, several changes—which have been subsequently recommended by other authors—have been agreed upon.

First, a 5 cc. test dose of dye is injected into the aorta and a film is taken to ascertain the level and exact position of the needle within the lumen of the aorta. Secondly, if the first injection of 20 cc. of dye does not produce a satisfactory aortogram, another injection is not made. Finally, increased clinical experience has allowed a marked reduction in the number of aortograms performed. There have been no signficant complications encountered using this technique.



The Memorial Hospital, Wilmington, Delaware

● Total pelvic exenteration has been proven effective as a treatment of extensive pelvic malignancy. One complication of this procedure is the development of perineal-intestinal fistula, the detailed management of which is described in this paper.

## MANAGEMENT OF LATE NON-MALIGNANT PERINEAL FISTULA AFTER TOTAL EXENTERATION

HAROLD S. RAFAL, M.D.

The operation of total pelvic exenteration has emerged from the status of controversy. Though it is unpleasant for the physician to recommend, the surgeon to perform, and, above all, the patient to accept, time has proven that it affords an opportunity to save lives which otherwise would be lost. It is not the purpose of this paper to present an apologia for the procedure, describe the technic, or to submit the statistical analysis of end results in a large number of cases of pelvic evisceration. This has been done previously.

Since this procedure was first undertaken in Delaware over a decade ago, there is adequate evidence to show that some patients have been salvaged. Moreover, those cured have lived productive, if modified, lives and are glad to be alive. The purpose of the following case presentation is to describe the management of a perineal-intestinal fistula which developed at a date remote from the initial pelvic exenteration procedure. Details of management which will simplify treatment and prevent recurrence of this harrassing condition are described.

It is further suggested that the technic described may be applicable to intestinal fistulae, malignant or non-malignant, appearing anywhere in the abdomen. However, though applicable, it is not recommended for many fistulae which are best managed by direct resection and primary anastomosis.

The principle of exclusion of the fistulous tract with by-pass anastomosis is not new, and no claim for originality is made. The present day surgeon owes a debt to those pioneers of the past who, by trial and error, evolved methods of treatment which seem so obvious today.

#### Case Report

The patient was a 51 year old, gravida 2, para 2, white woman when first seen by Dr. John F. Hynes in February 1952. Her chief complaint was vaginal discharge of one month duration. She was treated at a university center for squamous cell carcinoma of the cervix in 1936. She had received 1600 r of external radiation to each of four pelvic fields. This was followed by 5400 mgm hrs. in two radium treatments at about ten week intervals of 3000 mgm. hours and 2400 mgm. hours respectively.

System review was essentially negative.

Physical examination was normal except for the pelvic findings. There was a moderate atrophy of the external genitalia. The vaginal introitus admitted two fingers without great difficulty. About 4 cm. within the introitus, an elevated hard mass was encountered. This involved chiefly the anterior vaginal wall, and extended somewhat on the left lateral vaginal wall. It was about 3 cm. in linear extent. Above this there was slight induration of the vaginal wall, but no appreciable mass. The vaginal apex was somewhat narrowed, ment. The mucosa in the region of the cervix and distal to it was red, inflamed, and bled slightly on examination. No distinct tumor was found in this location. The surface of the protruding mass was ulcerated. Biopsy was obtained without difficulty and without pain. On combined recto-vaginal examination, there was bilateral parametrial infiltration, somewhat more prominent on the left side. This, however, was not fixed to the lateral pelvic wall. There was induration surrounding the upper third of the vagina, particularly anteriorly behind the urinary bladder. The biopsy was reported as revealing squamous cell carcinoma. Approximately 50% of the cells examined were undifferentiated. The impression was that the patient had a recurrent carcinoma of the cervix.

In view of the previous heavy irradiation, it was felt that it would not be possible to control the recurrence by roentgen therapy without producing extensive radiation necrosis. Accordingly, surgical extirpation was recommended by us and accepted by the patient.

#### First Operation

Operation was performed on March 20, 1952. On the left antero-lateral wall of the vagina there was a prolific tumor mass measuring about 3½ cm. in diameter. This mass infiltrated the base of the bladder and the left parametrium. The

extension of the visible tumor in the excised specimen showed that it extended up to the vaginal apex, and had come close to the pelvic wall. A very thin shell of grossly uninvolved normal tissue separated the tumor mass from the line of transection. The tumor itself however was not transected. There was no evidence of infiltration of the tumor into the bladder mucosa or into the rectal mucosa. The uterus was small and atrophic. Upon opening the uterine cavity, a lacrimal duct probe could be passed down the canal to a point at the apex of the vagina. In view of these findings, it would seem that this represented a recurrent carcinoma of the cervic rather than radiation carcinoma of the vaginal wall. On abdominal exploration, there was no evidence of enlarged lymph nodes along the aortic, hypogastric, or external iliac vessels. There were several plaques on the mesentery of the small and large bowel which appeared to be calcified mesenteric lymph nodes, being stony hard in consistency and whitish in appearance as visualized through the overlying peritoneal layer. The gall bladder contained numerous calculi of varied sizes. The right kidney was ptotic, being found at the level of the third or fourth lumbar vertebra. The left kidney was normal in position. There was no gross evidence of metastatic deposits in the liver. The spleen felt normal in size, shape, contour and position. The ureters were not dilated. The right kidney, the only one which was directly visualized, appeared to be completely normal except for its low position.

#### **Total Exenteration**

A total pelvic exenteration was performed with removal of the bladder and lower ureters, internal and external genitalia, and rectum. Lymph node dissection was started at the bifurcation of the aorta, carried laterally along the external iliac vessels to the inguinal ligaments. The obturator neuro-vascular bundles with lymph node bearing fat pads were removed. The hypogastric vessels with accompanying lymph node bearing tissues were excised. En bloc mobilization of all these structures was carried down to the level of the levator muscles. After reconstruction and closure of the abdomen, dissection from the perineal approach was performed. An elliptical skin incision from the mons veneris to the tip of the coccyx was made. A radical vulvo-vaginectomy was incorporated with a standard abdomino-perineal resection, thus removing the total specimen en bloc

The reconstruction was effected as follows:

 The ascending colon and terminal ileum were isolated from continuity with the intestinal tract. Intestinal continuity was resored by anastomosis of the proximal end of the transected ileum to the transverse colon.

- The transected end of the ascending colon was sutured over and the distal cut end of the terminal ileum exteriorized in the right lower quadrant to function as a urethral orifice.
- The cut ends of the ureters were then anastomosed to the isolated ascending colon by the Coffey II technic.\*
- The transected sigmoid was exteriorized in the left lower quadrant as a permanent endcolostomy.

In this type of extensive resection there is no tissue available to peritonealize the pelvic floor. The huge pelvic and perineal defect oozes extensively and must be packed. Inevitably, this leads to an undesirable situation wherein coils of intestine are in contact with the packing. The packing is inserted from below after completion of the perineal dissection and removal of the specimen.

During the post operative period the packing is slowly removed so that an inflammatory membrane is developed to serve as the pelvic floor.

The operative procedure took 8½ hours, and was well tolerated. At no time did the patient's systolic blood pressure fall below 100 mms. of mercury, nor did the pulse rate rise above 110 per minute. Four and one half pints of blood were given during the procedure, two and half pints during the abdominal portion and two more pints were given rapidly during the perineal part of the dissection, which is usually quite bloody.

#### **Pathology Report**

The specimen consisted of the pelvic viscera in one large mass of tissue, including the sigmoid colon, rectum, and anus, the uterus, tubes and ovaries, entire vagina and vulva, the bladder and urethra, and all of the surrounding fatty areolar tissue. In the left posterior wall of the vagina was a fungating, granular tumor mass about 2 cm. in diameter projecting about 1 cm. above the surface of the vagina. This tumor mass penetrated into the base of the bladder, but did not penetrate entirely through into the bladder lumen. The uterus was small, and on opening it and probing down to the cervical canal, an opening into the vagina was found just medial to the tumor mass. The cervix as such could not be demonstrated. The tumor mass lay about 1 cm. lateral to the apparent opening of the cervix into the vagina. There was no apparent infiltration into the rectum, but there was slight infiltration laterally into the left parametrium. The dissection appeared grossly to be wide of tumor. No lymph nodes

could be palpated in this specimen, but several separate pieces of fatty areolar tissue were also submitted and two lymph nodes, rather small, were found in this tissue and were grossly negative for tumor.

#### Microscopic Results

Histological examination showed the tumor noted in the gross to be made up of sheets and clumps of atypical squamous epithelial cells, many of which were large and of bizarre shape and size. Mitotic figures were numerous. The tumor infiltrated into the parametrium and into the wall of the bladder but did not penetrate it. The lymph nodes in the gross did not show any evidence of metastatic deposits. Excision of the tumor appeared to have been complete.

#### Diagnosis

Recurrent epidermoid carcinoma of the cervix, grade III.

Post operatively the patient developed urinary drainage through the perineal defect after the removal of the packing. This ceased spontaneously within a week. Healing and convalescence was then satisfactory. The new bladder, constructed from isolated ascending colon and terminal ileum, was managed with an indwelling Foley catheter. The catheter, which the patient herself changes weekly, is intermittently drained. On occasions, when the patient does not have access to toilet facilities, such as on long trips, the catheter is connected to a rubber urinal strapped to the thigh. The patient has experienced no difficulty in managing the urinary or fecal stomata.

The patient returned to work as an office secretary on 8/13/52, approximately five months after operation. She had periodic post operative visits. On Sept. 1, 1954, an office note quotes the patient as saying that she "doesn't miss a day from work." There were asymptomatic hernias present about both exteriorized segments of intestine, i.e. ileum and sigmoid colon. There was also an asymptomatic herniation of the lower abdominal incision. The patient has had occasional attacks of gall bladder colic but has refused cholecystectomy.

In July 1957, more than five years after her initial procedure, the patient was readmitted to the hospital with the chief complaint of profuse perineal drainage of one week duration. The discharge consisted of intestinal contents, and was causing markedly painful excoriation of the perineum and buttocks. On examination there was an intestinal fistula at the apex of the perineal defect admitting two fingers. Multiple punch biopsy of the lips of the fistulous tract were reported as granulation tissue.

<sup>\*(</sup>Since this patient was operated upon, the reconstruction technic has been modified. At present, a direct mucosa to mucosa anastomosis is used to joint the ureters to a short, isolated, exteriorized loop of ileum; the so called Bricker operation).

#### **Findings**

Operation was performed on 7/19/57. The perineal defect created at the previous pelvic exenteraction operation revealed the presence of a small intestinal fistula at its apex. The defect was quite large. The finger could be readily inserted into the bowel in either direction. Small intestinal contents had been making exit from this defect. On abdominal exploration, the patient had numerous adhesions in the pelvis, including the small bowel and omentum. Exploration of the general abdominal cavity and para-aortic area and liver revealed no evidence of recurrent carcinoma of these sites. There was no peritoneal implants observed. Carcinoma was not detected in the perineal defect. A punch biopsy was again taken from the lip of the fistulous stoma. The patient had gallstones present in the gall bladder.

#### **Technique Used**

Before draping the patient, she was placed in the lithotomy position, and two catheters were inserted through the fistulous tract. Each was passed in opposite directions-i.e. into the afferent and efferent bowel. A long strand of black silk was sutured to the end of each catheter. The perineal defect was then packed to prevent the catheters from slipping out. The patient was then placed in the supine position and the abdomen prepared and draped in the usual manner. The abdomen was opened through a right paramedian rectus incision. It was noted, as was anticipated, that there was no posterior rectus sheath or transversalis fascia below the level of the previous transverse incision. These structures had been removed during the process of pelvic exenteration.

Hemostasis was obtained by clamp and ligature of #000 plain catgut. Numerous adhesions were divided by sharp and blunt dissection. The catheters previously placed into the intestinal lumen through the perineal fistula were readily palpable. The circulating nurse removed the packing, which had been left long, and made traction on the black silk sutures. This removed the catheters separately. In this way, the fact was verified that they had been lying proximal and distal to the fistulous opening. These two loops were then freed of adhesions. No attempt was made to free the fistulous tract by dissection. The bowel was transected about 4" proximal and distal to the fistula. The cut ends closest to the fistula were then turned in with running sutures of #000 chromic catgut, and a row of interrupted Halsted mattress sutures of #000 black silk, leaving a defunctionalized loop of small intestine approximately 8 inches long in the pelvis. The two remaining ends were then anastomosed by end-to-end technique. A slight amount of ooze was present. A drain was placed in the pelvis and brought out through a stab wound made lateral to the incision. The sponge count was taken and found to be correct. The abdomen was then closed, using through-and-through sutures to the fascia in the lowermost part of the incision up to the point where a transverse incision had been previously made. Above this level, a two-layer closure was effected, using interrupted sutures of #0 chromic catgut. Three slips of rubber dam drain were placed in the subcutaneous fat layer because of contamination of the abdominal wall from the colostomy and the ileostomy. The patient received one pint of blood during the procedure, which was well tolerated.

The patient had an uneventful post-operative course. The perineal discharge of the intestinal material stopped immediately after operation and the excoriation of the perineum and buttocks healed promptly. Discharge of mucous from defunctionalized fistulous bowel continued for several weeks but slowly decreased so that at present the patient is unaware of any troublesome discharge.

The enforced hospital admission afforded an opportunity to evaluate the patient's urinary tract by x-ray and laboratory studies. These revealed completely normal blood chemistry findings. An intravenous pyelogram was essentially normal. The patient had received no treatment for control of her urinary infection or maintenance of metabolic equilibrium in the interim between the first and second procedures.

#### DISCUSSION

Important advantages inherent in the principle and technic of by-passing the fistula are as follows:

 Past experience has demonstrated that complete mobilization of the fistulous tract with direct closure, even with resection and primary anastomosis, resulted in surprisingly high incidence of recurrence of fistula formation.

This may be explained as follows:

Since there is still no pelvic floor after resection of the fistula, another loop of intestine fills the gap. This loop may form a new fistula since it will be exposed to the same factors of attrition which initially caused the fistula. By leaving the initial fistula undisturbed, it serves as a permanent seal of the perineal defect.

2. A fistula may be the result of recurrent malignancy. If this be the case,

the principles of cancer surgery dictate that it be left undisturbed unless wide resection, giving hope for cure, is feasible. If this is not possible, leaving the fistula undisturbed obviates dissemination by seeding and massage. Moreover, it may be possible to treat the local recurrence in the fistulous rim by some form of radiation therapy. Fortunately, in this case, recurrence was not the problem.

- 3. The insertion of large catheters proximally and distally into the efferent and afferent loops is a refinement of technic having considerable merit. Following massive procedures, such as pelvic exenteration, in which extensive maneuver and extensive de-peritonealization are necessary, abundant adhesion formation and agglutination of intestinal loops must be expected. Almost inevitably coils of intestine are densely adherent, overlapping, and coursing in all directions. Without guideposts, such as afforded by the previously placed catheters, it often becomes necessary to completely unravel the whole perplexing mass of matted intestines in order to properly identify the fistula. This may become a herculean task, occasionally leading to abandonment of the procedure in despair. Also, the possibility of inadvertently entering the bowel lumen unnecessarily increases with each adherent loop requiring mobilization. Having palpable catheters in place permits the surgeon to approach the segment of fistulous intestine by "touch," so to speak. This reduces dissection to a minimum and obviates unnecessary handling of bowel, bleeding, and inadvertent entrance into unoffending loops of intestine.
- Should disseminated intra-abdominal tumor recurrence be present, here again undesirable manipulation of tumor may be kept to a minimum.

I have not seen this refinement described, but there is little doubt that it has been used elsewhere in the past, and recorded. If so, no harm is done by re-emphasis at this time.

#### **Later Complications**

Following the second operation, the patient, as noted above, had a moderate amount of perineal mucous discharge which progressively decreased. She now has a marked degree of prolapse of the intestinal mucosa into the perineal defect, but it does not protrude externally. She states that "if you didn't tell me it was there I wouldn't know it." Should it become troublesome, amputation of redundant bowel from below should present no problem.

Another interesting aspect of her present status is the opportunity of reconstructing a functioning vagina, utilizing the mucosa of the fistulous loop.

The patient has recently been questioned about this point. However, she is now almost 60 years of age, her husband is in poor health, and resumption of intercourse apparently does not interest her.

She is quite vigorous and working daily.

#### SUMMARY

- A case history of recurrent carcinoma of the cervix, 15 years after successful roentgen therapy, is described. The surgical treatment of this condition by pelvic exenteration is briefly discussed.
- The management of a perineal small intestinal fistula is described in detail with a description of a refinement of technic. The benefits of the procedure are emphasized.
- The urinary tract status of the patient five years after ureteral transplantation by Coffey II technic is presented.
- The opportunity of using by-passed intestinal prolapsed loops through a perineal defect for vaginal reconstruction is mentioned.

## Guest €ditorial

#### RESOLUTION

#### Board of Directors, Memorial Hospital

IN TRIBUTE TO THE MEMORY OF JAMES GUIE SPACKMAN

The Board of Directors of The Memorial and Eugene duPont Memorial Hospital, in annual meeting assembled, record with sorrow and profound regret, the passing, on April 9, 1959, of James Guie Spackman, M.D., who for more than forty-three years served as a member of the surgical staff of this hospital.

Doctor Spackman received his Doctorate in Medicine from Hahnemann Medical College and Hospital of Philadelphia in 1912. Following an internship of one year he was appointed to a residency in general surgery in that institution under the tutelage and guidance of William B. Van Lennep, Professor of Surgery and Surgeon in Chief.

In 1915 Doctor Spackman became a member of the attending surgical staff of our institution, then known as the Homeopathic Hospital.

In 1918 Doctor Spackman was commissioned as an officer in the Medical Reserve Corps and assigned as a member of the surgical staff of the Army Medical Center at Vichy, France. Upon completion of this assignment he resumed his duties in our hospital.

In due time Doctor Spackman became director of the surgical department of our hospital and later a Founder member of the American Board of Surgery. In 1950 he relinquished his responsibilities as the director of the surgical department and became chief consultant in surgery.

To Doctor Spackman must go all honor and full credit for having brought into being an alert and competent surgical staff, composed of surgeons, physicians, specialists, nursing and other personnel.

The records reveal that as a result of Doctor Spackman's activities the demands upon the hospital for expansion in all departments were immediate and pressing.

With funds contributed by philanthropists, the community at large and patients, this board endeavored to provide the facilities and staff with which to meet the ever increasing requirements.

Through the leadership of Doctor Spackman, the first approved surgical residency in Delaware was established in this hospital as was the first fully accredited cancer clinic. Through his interest and influence highly qualified specialists were attracted to our hospital staff.

The years which have passed since the turn of the century have been referred to as the golden era of medicine. Knowledge gained through research has made possible, advances in anesthesiology, surgical techniques, laboratory procedures and therapy. Emphasis upon the sound education and adequate training of physicians and surgeons have had an enormous impact upon the quality of medical care now available to the public.

Doctor Spackman not only participated personally in the application and use of the

new methods and techniques but by example and precept inspired his staff and students to do likewise.

As a Fellow of the American College of Surgeons and through his association with colleagues in other clinics he brought to our hospital first hand knowledge of the advantages and pitfalls of that which was new or different.

Doctor Spackman accorded to the poor and unfortunate the same considerate and thorough attention as he did to those who possessed means and influence. In manner he was rather reserved. With associates he was friendly and witty. His analysis of colleagues was shrewd and his characterization of their peculiarities amazingly apt.

It is our conviction that Doctor Spackman's outstanding contribution to this hospital and to this community was his unfailing example of professional integrity. Through his students, Doctor Spackman's influence will extend through the years.

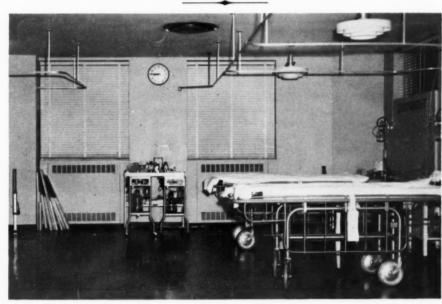
An example of his devotion to the highest

principles of the medical profession may be found from an article written by Dr. George T. Pack, noted surgeon a quotation which Doctor Spackman included in his annual report for 1948, as chief of the surgical department.

"With the knowledge of the inevitability of death from cancer that is not treated, it seems unnecessary to state that no surgeon would refuse a patient the slightest chance for a cure, or even relief, because of fear of criticism or failure, or an unnatural pride in low figures for operative mortality. Nor should any surgeon attempt to play God and decide arbitrarily, that a certain cancer patient had lived a sufficiently long life, or that he had so few remaining years of even normal life expectancy, that operation, at best, would hardly be worth while."

Be it resolved that this expression of our sentiments of regard and respect be made a part of the minutes of this Board and a copy thereof be sent to the bereaved family.

April 28, 1959



View of Recovery Room — Spackman Surgical Wing, Memorial Hospital, Wilmington, Delaware

#### DOCTOR JAMES G. SPACKMAN, SURGEON-TEACHER

FRANK A. JONES, M.D.

There is no doubt that Dr. James G. Spackman was a master surgeon. He was a brilliant clinician, a keen diagnostician, and a proficient technician. He was ever alert to the varied aspects of disease and often warned the less experienced to be on guard for signs and symptoms that foreshadowed a complication. Because of his wide experience he developed the art of imperturbability and equanimity so well described by Osler in his Aequanimitas. When a set of circumstances seemed to pose a problem, Dr. Spackman was able to choose the proper course whether that be action or apparent purposeful inaction. This was reassuring and comforting to his patients and their families on the one hand and served as a magnetic influence upon his resident staff.

In referring to Dr. Spackman as a master surgeon, it should be emphasized that many of his major procedures were performed successfully at a time when the outcome depended more upon good surgical judgment and technique because the adjuncts of whole blood transfusions, antibiotics, fluid and electrolyte therapy, and the wide range of anesthetic agents were not so readily available. While it must be said that there is no substitute for good surgical judgment and technique, the adjuncts named sometimes mean the difference be-

tween success or failure. Therefore, more credit is due Dr. Spackman for his successes. It is fitting to state that a patient with adenocarcinoma of the head of the pancreas operated upon by Dr. Spackman in the early years of the 1940's lived for more than three years following a two-stage operation; one with adenocarcinoma of the transverse colon with extension to the stomach has remained well and free of that disease from 1940 until the present time and that an infant born in 1941 with a large congenital hernia of the left diaphragm survived the initial transabdominal repair and subsequent repair of the ventral hernia (initial skin closure was done purposely) about a year later and is living and well now.

While it was generally known that Dr. Spackman was a master surgeon, perhaps, it was not generally known that he was also a natural born teacher. His close associates and all his resident staff appreciated his ability to teach by precept and by example. He was eager to pass on to others as much as he could of what he had learned by experience in the school of "hard knocks." Because of his consideration for patients and his interest in the growth of his residents he would occasionally say, "You do not need to get your fingers burned where mine have already been burned."

At this point he would warn of inherent dangers of a disease or of a surgical procedure. It might have been a matter of surgical judgment as to the appropriate time and circumstances for operation upon a patient with thyrotoxicosis or just how far one should go during the procedure, such as ligation of the vessels alone or a resectional procedure in addition. (This was prior to the use of antithyroid drugs, of course). The whole list of general surgical procedures was well covered in and outside of the operating room during the course of a surgical residency. Nor did the period of instruction cease with the completion of the residency, for he realized that medical and surgical educations are a continuing process and was always glad to be consulted relative to any surgical problem in which his experience had been broad. This covered a lot of ground.

Dr. Spackman was always neat and tidy. This applied equally as well to his dress as to his surgical technique, dressings and redressings. He was mild mannered but firm. He insisted upon quietness in all parts of the hospital but especially in the operating room suite. Here he was nearly always deeply earnest and serious for he felt it was a requirement for the avoidance of errors in technique and judgment. He insisted upon the use of the best tools and suture materials and demanded respect in the use of delicate surgical instruments and their appropriate use at all times. He was almost uncanny in his method of maintaining an alert and wide-awake attitude on the part of his surgical assistants. rarely required more than an occasional use of the words, "store, store," on his part to have continuous, unremitting exposure of the operative field. For those unfamiliar with the term, it originated as the method of getting attention in a general country store that carried dry goods, notions, groceries, hardware, and so forth and, perhaps, housed a third-class post office, the whole being operated by a single clerk every day but Saturdays.

He was prone to depend upon records

or notes as a check list in his everyday work and for that reason provided each surgical resident with a note book. This was his way of making very sure that he could depend upon us to remember to do the things he asked of us.

He was precise and generally accurate in his description of the size of surgical lesions. A centimeter ruler was always present in the tissue room and he usually provided each resident with one so that standard units of measurement were referred to rather than certain objects, such as a lemon, orange or grapefruit.

He urged surgical residents to see and

study all tissues removed at operation and to study the fixed, prepared slides with the microscope. This also applied to x-ray pictures both preoperatively and postoperatively. The appropriate film (or films) was also available for review during the course of the operation. The pathologist and/or roentgenologist were often invited to the operating room to view the pathology and to offer opinions and advice as indicated.

Dr. Spackman was accomplished in taking histories and recording the physical findings. These documents were short and complete and contained the pertinent data. The questions—what?, when?, where and how?—were included. An additional *must* in the case of female patients was the inclusion of a statement regarding the date of the last menstrual period.

The physical examination was done in a systematic fashion. Too great emphasis cannot be placed upon this point of orderly procedure. To do otherwise would lead to errors of omission and possibly an incorrect diagnosis or no diagnosis at all. His method of examining an abdomen is worth describing. The patient is positioned flat in bed in a good light with hands folded across the chest and legs straight. The lower chest, entire abdomen and upper thighs are exposed for inspection. The patient is requested to breath deeply and then to cough. Femoral areas are inspected

along with the entire abdomen, examiner on patient's right. Gentle palpation is begun in area suspected of being normal, gradually progressing to area suspected of being diseased. Percussion is then done and followed by auscultation. Pelvic and rectal examinations complete the clinical part of the procedure. The point of having the patient breathe deeply and cough are of special value in locating the area of pain and tenderness. The procedure of inspecting all the abdomen and especially the femoral regions makes that procedure complete.

Preoperative and postoperative orders were written legibly, in large letters and on every other line. The orders of special importance were underscored. Rather than write p.r.n., an order for morphine sulfate was often written to be given at a specified time of night or day unless the patient was actually sleeping at those hours. Orders of unusual significance were also brought to the attention of the nurse in charge and explained in detail.

Dr. Spackman kept abreast of the advancements in surgery through reading and visiting large medical centers. His personal library contained copies of the best books and monographs. We were made welcome to read these books whenever the time permitted. Important articles in the surgical journals were pointed out as being very worthwhile reading material.

Much has been written in surgical journals about common duct injuries in surgery of the biliary tract. Surgical residents at the Memorial Hospital have been warned about the grave nature of these injuries to the extent that so far as I know there has been only one injury in nineteen years. It, therefore, is appropriate to list Dr. Spackman's ideas about how these injuries can be avoided and they are: (1) Operate with good relaxation of the patient; (2) Insist on good exposure at all times; (3) Ligate individually the cystic duct and cystic artery and only after the common duct and common hepatic duct have been demonstrated.

He had very strong feelings against unnecessary operations. He realized the dangers of unforseen, unavoidable and fatal complications. If surgery were indicated these risks were taken as a necessity and he often stated: "The punishment should fit the crime." He considered the economic hardships resulting from time lost from work and from the expense of hospital and doctors' bills due to a unnecessary operation.

He had a sense of pride in correct diagnoses and was willing to make the effort and take the time to arrive at a correct decision rather than "operate and see." Finally, he set a standard that he would be pleased to have any first-rate surgeon visit the operating room and see what procedure was being done at any time of day or night. He considered it "poor sport" to remove a normal appendix and compared it to "shooting a barnyard hen at close range with a shotgun" on the one hand versus big game hunting on the other hand.

From the medicolegal angle he was always careful about patient identification and routinely checked chart information against patient's statement regarding the side on which a hernia existed prior to the administration of the anesthetic!

With all of his qualifications as a surgeon and teacher, Dr. Spackman had qualities of leadership. Through and by the help of his associates the surgical program at the Memorial Hospital has been approved for four years of surgical training. The operating room suite in the new wing of the hospital has been named in his honor and serves as a memorial to him now and will so serve in future years. His influence extended to all the branches of surgery and medicine and even into the school of nursing and into the administrative field. It is reflected in the institution as it stands today and it will continue into the future. It is hoped that the sound fundamentals of surgery that he practiced and taught will be perpetuated into future generations and in fact never die.

#### Dr. Spackman's Residents

"The great teacher is he who will admit the existence of real problems in his own experience and through counsel, encouragement and example help those whom he trains to surpass those who teach."

These words from a recent editorial in one of our surgical journals seem singularly appropriate as one contemplates the spirit that motivated Dr. Spackman's surgical life. "Counsel, encouragement, and example"—these were lavishly offered to all who would partake of them. Indeed in the vernacular of the day, one might say that for him this teaching habit was a compulsive thing and undoubtedly as rewarding to him as it was enriching to the recipient. A natural and inevitable consequence of this compulsiveness to teach ultimately found its expression in a more formal and more elaborate way — a surgical residency program. It first received accreditation on a three-year basis in 1940. In the years since then some twenty young men have completed the course of training, received the coveted certificate of the American Board of Surgery, and without exception, I believe, gone on to a successful career in their chosen field.

Their several contributions to this issue of the Journal speak for themselves. In scope, variety and scholarliness they bear witness to the wholesome and inspiring influence of their resident days and to the truly great teacher who guided them through this period. It was a time when close personal contact between teacher and student was not only possible but was exploited for its unusual and reciprocal benefits. It is obvious that Dr. Spackman's dedication as a surgeon and as a teacher of surgery has left an indelible mark on all who were privileged to serve under his leadership. He would undoubtedly have agreed with Dr. Wangensteen who had this to say on the occasion of a twenty-fifth anniversary dinner in his honor—

"I have become quite accustomed and reconciled to the frequency with which my efforts are being surpassed by the more significant contributions of some of my distinguished proteges. But is that not the hope and fate of all teachers?"

JOHN C. PIERSON, M.D.



JOHN C. PIERSON, M.D., F.A.C.S.

1924 - 1929

Born in Wilmington. Premedical education at the University of Delaware. M.D. Hahnemann Medical College 1923. Internship, Hahnemann Hospital, Philadelphia 1923-24. Graduate work in Obstetrics and Gynecology, New York Lying-in Hospital 1929. Diplomate, American Board of Surgery. Currently, Director, Department of Surgery, Memorial Hospital, Wilmington, Delaware.



#### WALLACE M. JOHNSON, M.D.

1923 - 1924

Born in Uniontown, Pennsylvania. Premedical education at University of Michigan. M.D. Michigan 1922. Internship, Homeopathic Hospital, Wilmington 1922-23. Served in World War II in E.T.O. and U.S. 1941-46, Lieutenant Colonel. President of Delaware State Homeopathic Medical Examining Board; Member, Medical Council of Delaware. Formerly, Mayor of Newark, Delaware.

#### PAUL A. SHAW, M.D.

1929 - 1930

Born in Wilmington. Premedical work at University of Delaware. M.D. Hahnemann 1928. Internship at Homeopathic Hospital, Wilmington 1928-29. Training in radiology, Memorial Hospital, Wilmington 1943-46. Diplomate, American Board of Radiology 1946. U.S. Army 1942-43. Director, Department of Radiology, Memorial Hospital, Wilmington. Consultant Radiologist, Medical Department, E. I. duPont de Nemours and Company.



#### JOHN H. YEAMAN, M.D. 1935 - 1938

Born in Philadelphia. M.D. Hahnemann 1934. Intern Homeopathic Hospital, Wilmington 1934-35. Captain, Army Air Force 1942-45. Graduate student, Department of Dermatology, University of Pennsylvania 1951-52. Resident in Dermatology, Philadelphia General Hospital 1952-53 and Jefferson and Pennsylvania Hospitals, 1953-54. Dermatopathology, University of Pennsylvania 1954-55. Diplomate, American Board of Dermatology and Syphilology; Fellow, American Academy of Dermatology. Dermatologist, Bridgeton, New Jersey. Consultant Dermatologist, Newcomb Hospital, Vineland, New Jersey.



#### THOMAS J. BULGER, M.D., F.A.C.S.

1938 - 1940

Born in Brooklyn. M.D. Columbia 1936. Surgical intern, French Hospital 1936-38. Diplomate, American Board of Surgery. Formerly Director of Surgery, Department of Atomic Energy Commission, Hanford, Washington. Currently Attending Chief, Surgery, Memorial Hospital; Chief of Surgery, Wilmington General Hospital; Assistant in Surgery, St. Francis Hospital; Instructor in Surgery, Hahnemann Medical College; Consultant Surgeon, E. I. duPont de Nemours & Company.



#### DELAWARE MEDICAL JOURNAL



#### FRANK ALLEN JONES, M.D., F.A.C.S.

1940 . - . 1943 1946 . - . 1947

Born in Winton, North Carolina. Premedical education at University of North Carolina. M.D. Jefferson 1937. Intern 1937-39 and Chief Resident 1939-40, both at Graduate Hospital, University of Pennsylvania. Diplomate, American Board of Surgery, 1949. Captain, U.S. Army Medical Corps 1943-46 a surgeon in evacuation hospital, E.T.O.; Bronze Star. Currently, Attending Chief in Surgery and Associate Thoracic Surgeon, Memorial Hospital.

#### JOHN F. KUSTRUP, M.D., F.A.C.S., F.I.C.S. 1940 - 1941

Born in Trenton, New Jersey. M.D. Georgetown University 1930. Internship, St. Francis Hospital, Trenton 1930-31. Graduate student in surgery, Graduate School of Medicine, University of Pennsylvania 1939-40; graduate work in urology, Cook County Hospital Graduate School. Diplomate, American Board of Surgery. Formerly, Consulting Surgeon, State Hospital and State Prison Hospital, Trenton, New Jersey. At present, Associate in General Surgery, St. Francis Hospital; Surgeon, Orthopedic and Trenton General Hospitals. Past President, Mercer County Medical Society.



#### LESTER J. WALLMAN, M.D.

1941 - 1942 1945 - 1946

Born in New York City. Premedical education at Yale University. M.D. Yale 1938. U.S. Army 1942-45. Diplomate, American Board of Neurological Surgery 1950. Currently Associate Professor of Neurosurgery, University of Vermont; Neurosurgeon, DeGoesbriand Memorial and Mary Fletcher Hospitals, Burlington.



JOSEPH P. SELTZER, M.D., F.A.C.S. 1942 - 1944

Born Fairfield, Maine. Premedical education at University of Maine. M.D. Jefferson College, 1937.

ROBERT ARTHUR MINO, M.D. 1943 - 1945 1947 - 1948

Born in Anawalt, West Virginia. Premedical education at Concord College and University of West Virginia. M.D. Yale 1942. Internship Memorial Hospital, Wilmington 1942-43. Assistant Resident in Oncology, Memorial Hospital, New York 1945-46. Formerly member of surgical staff, Memorial Hospital, Wilmington and Clinical Instructor in Surgery, Hahnemann Medical College. Diplomate, American Board of Surgery 1950. Currently on active surgical staff of Protestant Deaconess and Welborn Baptist Memorial Hospitals, Evansville, Indiana and active in the American Cancer Society.



C. H. KIM, M.D.

Born in Kosanchin, Korea. Premedical education at University of Minnesota. M.D. Jefferson 1941. Internship at St. Joseph's Hospital, Philadelphia 1941-42. Surgical residencies: Doctor's Hospital, New York 1941-42; Memorial Hospital, New York 1944; Holy Cross Hospital, Salt Lake City, Utah 1950-51; resident in thoracic surgery, City of Hope, Duarte, California 1951-52. Formerly Staff Surgeon, Healthwin Hospital, South Bend, Indiana 1946-50. Currently on the staff of the Queen of Angels, Temple, Morningside, View Park Community, and Bella Vista Hospitals, Los Angeles.

1945



**APRIL**, 1960

#### DELAWARE MEDICAL JOURNAL



#### HAROLD S. RAFAL, M.D., F.A.C.S. 1945 - 1947

Born in Brooklyn. Premedical education at Columbia University. M.D. Medical College of Virginia 1943. Internship, Beth Israel Hospital, New York 1943-44. Assistant Resident in Surgery, Medical College of Virginia 1944-45. Diplomate, American Board of Surgery. Currently, Attending Chief of Surgery, Memorial and Wilmington General Hospitals; Assistant in Surgery, St. Francis Hospital, Wilmington. Active in American Cancer Society.

#### JOSEPH N. ATTIE, M.D., F.A.C.S. 1946 - 1949

Born in New York City. Premedical education City College of New York. M.D. American University of Beirut, Lebanon 1942. Residencies: Queens General Hospital 1942-43; Memorial Hospital, N.Y. 1949-50; Mt. Sinai Hospital, N.Y. 1951. Diplomate, American Board of Surgery. U.S. Army 1944-46. At present, Assistant Clinical Professor of Surgery, State Medical School, Brooklyn; Chairman of Tumor Board, Director of Tumor Clinic and Head and Neck Surgery, Maimonides Hospital, Brooklyn; Director of Head and Neck Surgery, Long Island Jewish Hospital, Assistant Attending Surgeon, North Shore Hospital, Manhasset, N.Y.



#### EDWIN A. MEKANIK, M.D., F.A.C.S.

1947 - 1948 1950 -1953

Born in Philadelphia. M.D. Hahnemann Medical College 1946. Internship, Delaware Hospital 1946-47. Lieutenant Commander, U.S.N.R. 1954-56. Attending Chief of Surgery, Memorial Hospital, Wilmington.



#### ARTHUR I. MURPHY, JR., M.D., F.A.C.S. 1947 - 1950

Born in Pittsburgh. Premedical work at University of Pennsylvania. M.D. Penn 1943. Internship at West Penn Hospital, Pittsburgh. Student-physician in urology, University of Pennsylvania Graduate School of Medicine 1946-47. Tumor surgery, Memorial Hospital, New York City 1950-54. Diplomate, American Board of Surgery 1951. U.S. Army in E.T. 1944-46. Currently associated with University of Pittsburgh Medical School, Presbyterian and Woman's Hospitals, the Magee Allegheny General, and Suburban Hospitals.

DAVIS A. BALTZ, M.D. 1948 - 1951

Born in Nashville, Tennessee. Premedical education at Franklin and Marshall College. M.D. Indiana 1947. Diplomate, American Board of Surgery. Currently, Chief of the Surgical Service, Chairman of the Tissue Committee, Member of Executive Committee, and Director of Surgical Residency Program, Kaiser Foundation, Vallejo, California. Served in U.S. Army Medical Corps as Chief of Surgery, 9th Station Hospital, Salzberg, Austria and as Assistant Chief of Surgery, U.S. Army Hospital, Fort Benning, Ga.



**APRIL**, 1960

#### WARREN G. SMIRL, M.D. 1949 - 1950

Born in Waukesha, Wisconsin. Premedical work at Carroll College. M.D. Columbia University 1945. Internship St. Joseph's Hospital, Milwaukee, 1945-46. U.S. Air Force 1946-47. Currently member of active surgical staff, Waukesha Memorial Hospital.

#### DELAWARE MEDICAL JOURNAL



#### ALAN IDDLES, M.D.

1950 - 1954

Born, Bryn Mawr, Pennsylvania. Premedical education at Cornell University. M.D. Cornell 1948. Internship New Britain General Hospital 1948-49. Resident in Obstetrics and Gynecology, Bryn Mawr Hospital 1949-50. Diplomate, American Board of Surgery 1956. Captain, Medical Corps, U.S. Army 1955-57. Currently Attending Surgeon, Bozeman Deaconess Hospital, Bozeman, Montana. Consultant in Surgery, Madison Valley Hospital, Ennis; Barrett Memorial Hospital, Dillon; and Sheridan Emergency Hospital, Sheridan; Mountain View Memorial Hospital, White Sulphur Springs, Montana.

#### L. MARIO GARCIA, M.D.

1952 - 1955

Born in Fredonia, Colombia. M.D. University of Antioquia, Medellin, Colombia 1949. Internship, San Vincent of Paul Hospital, Medellin 1949-50. Graduate course in general surgery, University of Pennsylvania Graduate School of Medicine 1951-52. Preceptorship, general surgery, Wilmington General Hospital 1955 and Salem Hospital, Salem, N.J. 1958-59. Rotating internship 1956-57 and General Practice Resident 1957-58, both at Memorial Hospital, Wilmington. Currently Assistant in Surgery at the Memorial, Wilmington General and St. Francis Hospitals.



#### ROY GEORGE MUNROE, M.D., C.M.

1952 - 1956

Born in Springhili, Nova Scotia, Canada. M.D. Dalhousie University, Halifax, Nova Scotia. Was in the Royal Canadian Navy in World War II. Currently in private practice in Stellarton, Nova Scotia. Certified in Surgery, Royal College of Physicians and Surgeons of Canada, 1959.

## Books

#### Recent Accessions to the Library of the Delaware Academy of Medicine

ALLERGY

Prigal, Samuel J.: Fundamentals of Modern Allergy, 1960. McGraw-Hill

BACTERIOLOGY

Timakov, V. D.: Microbial Variation, 1959. Pergamon

GYNECOLOGY AND OBSTETRICS (See also Pediatrics)
Willson, J. Robert; Beecham, Clayton T.; Forman, Isador; and Carrington, Elsie Reid: Obstetrics and Gynecology, 1958. Mosby

HEMATOLOGY

Albritton, Errett C.: Standard Values in Blood, 1952. Saunders

MEDICINE

Durham, Robert H.: Encyclopedia of Medical Syndromes, 1960. Hoeber

MISCELLANEOUS

Long, Rowland H.: The Physician and the Law, 2nd ed., 1959. Appleton-Century-Crofts Roberts, J. A. Fraser: An Introduction to Medical Genetics, 2nd ed., 1959. Oxford University Press

Strunk, William, Jr.: Elements of Style, 1960. Macmillan

MUSCULOSKELETAL SYSTEM

Hollinshead, W. Henry: Functional Anatomy of the Limbs and Back, 2nd Ed., 1960. Saunders

NEOPLASTIC DISEASES (See also Respiratory System)

Ministry of Health, U.S.S..R.: Symposium of Instructions on the Organization of Oncological Service, Prevention Diagnosis and Treatment of Cancer and Precancerous Diseases. 1956. U. S. Department of Health, Education, and Welfare.

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Poppen, James L.: An Atlas of Neurosurgical Techniques, 1960. Saunders

Russian Medical Literature: Central Nervous System and Behavior, 1959. U. S. Department of Health, Education and Welfare

OPHTHALMOLOGY

Anderson, J. Ringland: Ocular Vertical Deviations and the Treatment of Nystagmus, 1959, 2nd ed. Lippincott

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DeWeese, David D. and Saunders, William H.: Textbook of Otolaryngology, 1960. Mosby

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Lapin, B. A.: Problems of Infectious Pathology in Experiments on Monkeys, 1958. U. S. Department of Health, Education and Welfare

PEDIATRICS

Geddes, A. K.: Premature Babies, 1960. Saunders

May, Charles O.: Cystic Fibrosis of the Pancreas in Infants and Children, 1954. Thomas Murphy, Lois Barclay: Personality in Young

Children, 1st ed. Vol. II, 1956. Basic Books Schauffler, Goodrich C.: Pediatric Gynecology, 1958, 4th ed. Year Book

Slobody, Lawrence B.: Survey of Clinical Pediatrics 3rd ed., 1959. McGraw-Hill

PHARMACOLOGY

A.M.A.: New and Nonofficial Drugs, 1960.
Lippincott

Modell, Walter: Drugs of Choice, 1960. Mosby Welch, Henry: A guide to Antibiotic Therapy, 1959. Medical Encyclopedia

Wilson, Charles O. and Jones, Tony Everett: American Drug Index, 4th ed. 1960. Lippincott

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PSYCHIATRY

Liebman, Samuel: Emotional Forces in the Family, 1959. Lippincott

Menninger, Karl A.: The Human Mind, 3rd ed., 1953. Knopf

Menninger, Karl A.: Theory of Psychoanalytic Technique, 1958. Basic Books

Murphy, Gardner: In the Minds of Men, 1st ed., 1953. Basic Books

Murphy, Gardner: Human Potentialities, 1958. Basic Books

Trueblood, Elton: Alternative to Futility, 1958.
Harper

Wallerstein, Robert S.: Hospital Treatment of Alcoholism, 1st ed., 1957. Basic Books

PUBLIC HEALTH

Konstantinov, G. F.: Public Health in the U.S.S.R., 1957. U. S. Department of Health, Education, and Welfare

Maystrakh, K. V.: Organization of Public Health in the U.S.S.R. 4th ed., 1956. U. S. Department of Health, Education, and Welfare

SURGERY (See also Neurology)

Berson, Morton I.: Atlas of Plastic Surgery, 1948. Grune and Stratton

Davis, Loyal: Christopher's Textbook of Surgery, 7th ed., 1960. Saunders In Brief

Salt Lessens Shock

The value of using saline solutions to treat shock after injury—particularly in cases of patients with severe burns—has been established through extensive research carried on by the National Institutes of Health. Drinking saline solutions during the 48-hour period following injury has been found to be almost as effective for the patient as transfusions of equal quantities of plasma or whole blood. (Tests were made in Lima, Peru where very little plasma is available.)

Drug Industry has a Word for it Physicians who would prescribe drugs by generic name rather than by trade name "may be playing a type of medical Russian roulette," Dr. Rudolph H. Blythe, Director of Pharmaceutical Research for Smith, Kline & French Laboratories, told the Annual Pharmacy Congress. He pointed out that products labeled to contain identical compounds will not necessarily produce identical therapeutic effects. Dr. Blythe added that it is this efficiency of absorption which is the critical factor in the therapeutic utility of any product and establishes the difference.

Quote Without Comment The index of a 1959 edition of a textbook on pediatrics contains the entry, "Birds, for the." From the National Library of Medicine News.

**False Claim** 

Scientifically controlled studies of "immune milk"—sold at \$1.10 a quart and offered as a cure to relieve rheumatoid arthritis—show that this is a misrepresented product and has absolutely no effect on the disease, says the Arthritis and Rheumatism Foundation.

Computed Health

Questionnaires that cover a multitude of medical facts about the individual, such as the medical history of his forebears, childhood diseases, occupations, amounts of sleep and exercise, eating, drinking and smoking habits, etc., have been collected by 70,000 volunteer workers of the American Cancer Society from a halfmillion families in 20 states. This information will be transferred to punched cards and the answers processed during the next few years. Then, whenever an individual included in the survey dies, the State Health Department will send a copy of the death certificate to the American Cancer Society headquarters, and where the data will be analyzed. It is hoped that the findings, in addition to telling us what to do to cut down our chances of getting cancer, will give important new information about the etiology of other diseases; such as cerebral hemorrhage, diabetes, and heart disease. Among the puzzles that should be enormously clarified is the relation of diet and exercise (or lack of it) to heart disease. Computers are only now beginning to enter into medicine, and it is precisely such complex problems-involving vast masses of data-for which computers are designed.

#### Reporting of **Epilepsy** is a Must

It has been ruled by Chief Deputy, Attorney General Clement C. Wood, that doctors who diagnose and treat epilepsy are obligated to report it within a week to the State Motor Vehicle Bureau. This ruling was sought by Dewey A. Nelson, M.D., clinical neurologist, Wilmington. The reports are to be kept confidential and used to enforce the law in determining driving eligibility.

#### Welfare for the Aged

Tribute was paid to Dr. C. J. Prickett, superintendent of the State Welfare Home and Hospital for the Chronically Ill at Smyrna, for his foresight and experience in discharging his duties. The occasion was the dedication of the new 200-bed Candee Building at the hospital, named for Charles L. Candee, D.D., Pastor Emeritus of Wilmington's Westminster Presbyterian Church. Dr. Candee was honored for his long service to elderly people in this state.

#### Russian Hours

In a Curricula of the Higher Medical Schools, put out by the Ministry of Health, USSR, it is interesting to note that: 1. The Degree of Physicians (length of study, 6 years) is divided into three classes: Therapeutics (includes Surgery), Pediatrics and Public Health. 2. In all curricula of the Medical Institute, 390 hours are allotted to propaganda, which is divided as follows: a. 160 hours - History of the Communist Party of the Soviet Union. b. 90 hours — Political c. 140 hours - Dialetic and Historical Materialism. (State examinations must be taken for these subjects.) 3. Hours, varying from 154-166 must also be allotted for physical education,

#### Mr. Peanut

The irresistible peanut may add to his versatility by becoming the conquerer of the disease of kings. Something in the meat of this seed appears to be capable of stemming the flow of blood in hemophilia. This accidental discovery was made by Dr. Bruce Boudreaux, a hemophiliac who is zoologist at Louisiana State University. Dr. Boudreaux has been testing this hypothesis and his work is still in the experimental stage.

### on Aging

Regional Conference The Medical Societies of Delaware, Maryland, Virginia, New Jersey, West Virginia and the District of Columbia were co-sponsors of the Regional Conference held in Baltimore, March 30-31, sponsored by the American Medical Association's Committee on Aging. Dr. William O. LaMotte, Jr., Wilmington, a member of the Commission on Public Affairs, Medical Society of Delaware, was one of the speakers and Dr. Alfred R. Shands, Jr., medical director of the Alfred I. duPont Institute and past president of the Medical Society of Delaware, presided at the first day's afternoon session. Other speakers from Delaware were Dr. Harvey Stahl, president of the American Association of Retired Persons, Delaware Chapter, and Mrs. Herbert E. Dobbs of Greenville, board member of the Wilmington Senior Center.

#### In the News

The Delaware Blue Shield Plan had enrolled almost 61% of the state's population at the end of 1959, reports National Association of Blue Shield Plans.

#### MAJOR MEDICAL MEETINGS IN DELAWARE

#### Standing Schedule

Beebe Hospital	General Staff	2nd Friday	Monthly
Delaware Hospital	General Staff	2nd Tuesday	Feb., May, Sept., Dec.
Kent General Hospital	General Staff	3rd Tuesday	Monthly
Memorial Hospital (Wilmington)	General Staff	2nd Tuesday	Jan., March, June, Oct.
Milford Memorial Hospital	General Staff	2nd and last Tuesdays	Monthly
Nanticoke Memorial Hospital	General Staff	1st Thursday	Monthly
St. Francis Hospital	General Staff	4th Tuesday 1st Tuesday	March, May, Oct. December
Wilmington General Hospital	General Staff	4th Tuesday	Jan., April, Sept., Nov.

Kent County Medical Society	Monthly Meeting	3rd Tuesday	September - June
New Castle County Medical Society	Monthly Meeting	3rd Tuesday	September - June
Sussex County Medical Society	Monthly Meeting	2nd Thursday	September - June

Delaware Academy of General Practice	Monthly Meeting	1st Tuesday	September - June
Delaware Pathology Society	Weekly Meeting	Each Friday	

#### Special Schedule

The Royal Society of Medicine	Pathological Conference	of Medicine	April 20, 1960
Delaware Academy of General Practice	Diseases of the Chest	Emily P. Bissell Hospital	April 23, 1960
	Open House at the Viru	is Laboratory of Delaware	— Tallman Bldg.
American Medical Association	Annual Meeting	Miami Beach, Fla.	June 13-17, 1960
Medical Society of Delaware	Annual Meeting	Rehoboth, Delaware Sept	tember 8, 9, 10, 1960
Delaware Academy of General Practice	Annual Meeting	Delaware Academy of Medicine	December 9, 10, 1960

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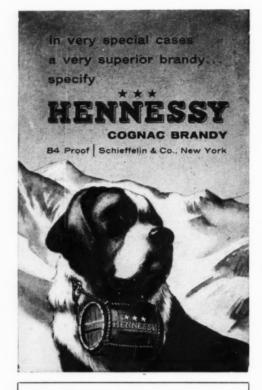
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Never has cancer been under such concerted attack as today. To assess the progress made, the American Cancer Society and the National Cancer Institute are sponsoring the 4th National Cancer Conference, September 13, 14 and 15, 1960, at the University of Minnesota, in Minneapolis.

The conference theme is "Changing Concepts Concerning Cancer." Attending will be clinicians and research workers from the United States and other countries, as well as residents, interns and medical students.

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Tofrānil® brand of impramine HCl: tablets of 25 mg., bottles of 100. Ampuls for intramuscular administration only, each containing 25 mg. in 2 cc. of solution, cartons of 10 and 50.

References: 1. Ayd, E. J., Jr.: Bull. School Med., Univ. Maryland 44:29, 1959. 2. Azima, H., and Vispo, R. H.: A. M. A. Arch. Neurol. & Psychiat. 81:658, 1959. 3. Lehmann, H. E.; Cahn, C. H., and de Verteuil, R. L.: Canad. Psychiat. A. J. 3:155, 1958. 4. Mann, A. M. and MacPherson, A. S.: Canad. Psychiat. A. J. 4:38, 1959. 5. Sloane, R. B.; Habib, A., and Batt, U. E.: Canad. M.A. J. 80:540, 1959. 6. Straker, M.: Canad. M.A.J. 80:540, 1959. 7. Strauss, H.: New York J. Med. 59:2906, 1959.

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## Tetracycline Phosphate Complex (TETREX®) in the Therapy of PNEUMONIA

Preferably, antibiotic therapy should be based on pretreatment culture of the offending pathogen, but in bacterial pneumonia the problem may well be too pressing to permit the required delay of 24 to 48 hours. A differential diagnosis among bacterial pneumonias, based on such clinical grounds as speed of onset, sepsis and pain may guide the choice of antibiotic for initiation of therapy.

Should clinical judgment dictate that antibiotic therapy be started immediately, at the same time a sputum sample or a subglottic swab can be sent to the laboratory for culture and sensitivity studies. If the response to the first antimicrobial agent proves unsatisfactory, a reasonable basis for changing therapy will then be at hand.

#### Choosing the Antibiotic

Since therapy must be started at once for bacterial pneumonia, it is advisable to choose a broad-spectrum antibiotic that quickly produces high levels of active agent (e.g., tetracycline phosphate complex, TETREX). Such an antibiotic probably has the best chance of controlling the pathogen, whether it be gram-negative or grampositive. And if the laboratory report shows that the invading organism is much less sensitive to tetracycline than to other agents, the patient can then be changed to an appropriate antibiotic. If the difference in sensitivity is slight, then the possibility of side effects, sensitization, and toxicity should be evaluated before changing therapy to another antibiotic.

The greatest number of bacterial pneumonias are caused by pneumococci, which respond very well to penicillin, tetracycline, and chloramphenicol. Also, these antibiotics are usually effective against the other gram-positive coccal pneumonias. But penicillin is ineffective against the viral pneumonias and the gram-negative Hemophilus influenzae and Klebsiella pneumoniae. Although K. pneumoniae causes only about 1 to 2 per cent of pneumonia cases on the average,1 these are apt to be acute and fulminating (Friedländer's pneumonia), with a high mortality rate if not effectively treated. Since pneumococcal pneumonia may be difficult to distinguish clinically from Friedländer's, except by gram-stained sputum smear, it may be wiser to start treatment with an agent also effective against Klebsiella.

Penicillin, however, in addition to having a limited spectrum, also causes many minor and some serious sensitivity reactions. In a recent survey<sup>2</sup> it was found that penicillin produced

severe skin reaction. But most important was the observation that anaphylactic shock, with a fatality rate of about 9 per cent, was the most frequent serious reaction. Such severe reactions are almost always associated with parenteral administration.

Tetracycline is also clinically effective in primary atypical pneumonia.<sup>3</sup>

The tetracyclines (e.g., TETREX) have the advantage of a broad range of antimicrobial activity and low toxicity. And in addition, the physician does not have to trouble himself or his patients with repeated blood studies when he prescribes TETREX. Minor reactions such as gastric upsets or mild skin rashes occur occasionally. The most serious side effects are staphylococcal and monilial overgrowth, but these are rare and can be adequately controlled.

No one would deny that appropriate antibiotic therapy has greatly reduced morbidity and saved many lives of patients with bacterial pneumonia. Nevertheless, general supportive measures in the care of patients remain important even today. Especially in the desperately ill patient, antibiotics are not considered as substitutes for the individual evaluation, clinical observation and judgment of the physician.

#### Some Micro-organisms Susceptible<sup>a</sup> to Tetracycline (TETREX)<sup>b</sup>

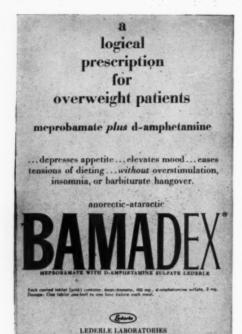
Streptococcus; Staphylococcus; Pneumococcus; Gonococcus; Meningococcus; C. diphtheriae; B. anthracis; E. coli; Proteus; A. aerogenes; Ps. aeruginosa; K. pneumoniae; Shigella; Brucella; P. tularensis; H. influenzae; T. pallidum; Rickettsiae; Viruses of psittacosis and ornithosis, lymphogranuloma inguinale, primary atypical pneumonia; E. histolytica; D. granulomatosis.

a Some strains are not susceptible.

b Table adapted from Goodman, L. S., and Gilman, A.: The Pharmaceutical Basis of Therapeutics. 2nd edition, New York, The Macmillan Co., 1956, pp. 1322-1323.

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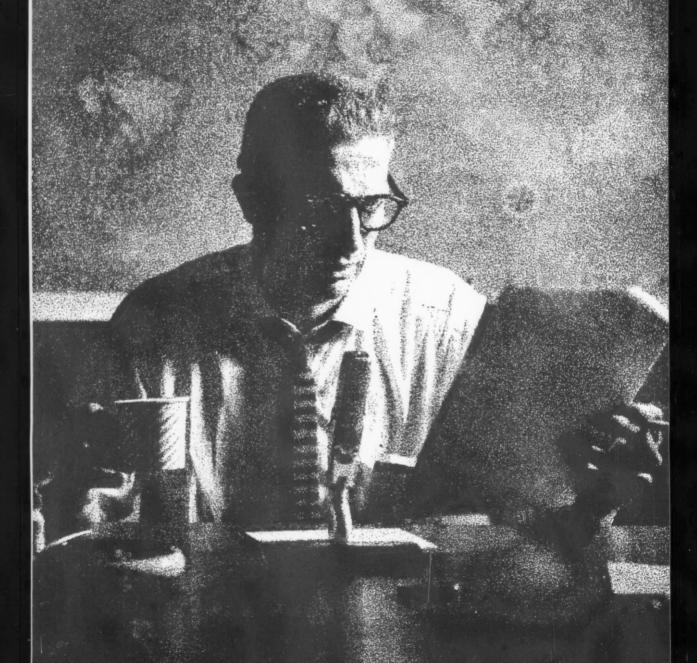
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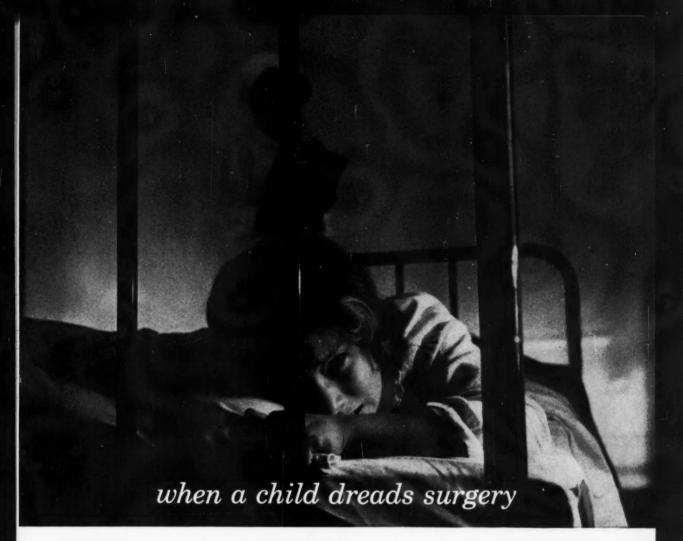
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Steiner, L., Webb, C., and Adriani, J.: The Preoperative Sedation of Children, Presented before the Southern Society of Anesthesiologists, Annual Meeting, April 23-25, 1959, Birmingham, Alabama.

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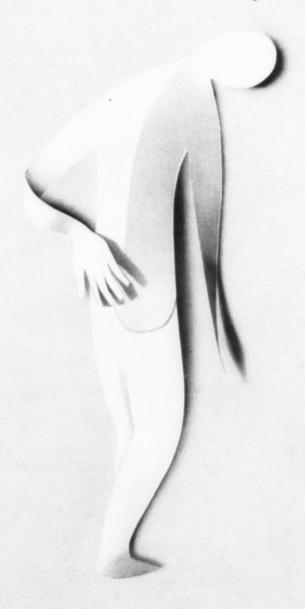
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I. Kestler, O.: In The Pharmacology and Clinical Usefulness of Carisoprodol, Wayne State University Press, Detroit, 1959. 2. Berger, F. M.; Kletzkin, M.; Ludwig, B. J.; Margolin, S., and Powell, L. S.: J. Pharm. Exp. Ther. 127.66 (Sept.) 1959. 3. Spears, C. E. and Phelps, W. M.: Arch. Pediat. 76:287 (July) 1959. 4. Phelps, W. M.: Arch. Pediat. 76:243 (June) 1959. 5. Friedman, A. P.; Frankel, K., and Fransway, R. L.: Papers presented at Scientific Meeting, New York State Society of Industrial Medicine, Inc., New York, Sept. 30, 1959. 6. Kuge, T.: Unpublished reports. 7. Ostrowski, J. P.: Orthopedics 2:7 (Jan.) 1960.

Literature and samples on request

Also available on request: The Pharmacology and Clinical Usefulness of Carisoprodol, Wayne State University Press, Detroit, 1959. (185 pages)



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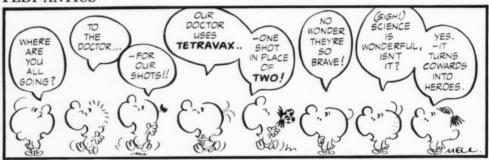
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. Atarax appeared to reduce anxiety and restlessness, improve sleep pat-terns and make the child more amenable to the development of new patterns of behavior..." Freedman, A. M.: Pediat. Clin. North America 5:573 (Aug.) 1958.

"... seems to be the agent of choice in patients suffering from removal disorientation, confusion, conversion hys-teria and other psychoneurotic condi-tions occurring in old age." Smigel, J. O., et al.: J. Am. Geriatrics Soc. 7:61 (Jan.) 1959.

"All [asthmatic] patients reported greater calmness and were able to rest and sleep better...and led a more normal life...In chronic and acute urticaria, however, hydroxyzine was effective as the sole medicament." Santos, I. M., and Unger, L.: Presented at 14th Annual Congress, American College of Allergists, Atlantic City, New Jersey, April 23-25, 1958.

"... especially well-suited for ambulatory neurotics who must work, drive a car, or operate machinery." Ayd, F. J., Jr.: New York J. Med. 57:1742 (May 15) 1957.

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Bayart, J.: Acta paediat. belg. 10:164, 1956. Ayd, F. J., Jr.: Cal-ifornia Med. 87:75 (Aug.) 1957. Nathan, L. A., and Andelman, M. B.: Illinois M. J. 112:171 (Oct.)

Settel, E.: Am. Pract. & Digest Treat. 8:1584 (Oct.) 1957. Negri, F.: Minerva med. 48:607 (Feb. 21) 1957. Shalowitz, M.: Geri-atrics 11:312 (July) 1956.

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Garber, R. C., Jr.: J. Florida M. A. 45:549 (Nov.) 1958. Menger, H. C.: New York J. Med. 58:1684' (May 15) 1958. Farah, L.: Inter-nat. Rec. Med. 169:379 (June) 1956.

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> Bagnall, A. W. (Univ. British Columbia, Vancouver, B.C.): A.M.A. Clinical Meeting (Scientific Section, Exhibit No. 124), Minneapolis, Minnesota, Dec. 2-5, 1958.

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Scherbel, A. L.; Harrison, J. W., and Atdjian, Martin: Cleveland Clin. Quart. 25:95, April, 1958.

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Cramer, Quentin (Kansas City): Missouri Med. 55:1203, Nov., 1958.



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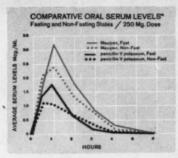
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Successful against these organisms: streptococci, staphylococci, E. coli, A. aerogenes, paracolon bacillus, Gram-negative rods, pneumococci, diphtheroids, Gram-positive cocci and others.

1. Boger, W. P.; Strickland, C. S., and Gylfe, J. M.: Antibiotic Med. & Clin. Ther. 3:378, (Nov.) 1956. 2. Boger, W. P.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 48. 3. Sheth, U. K.; Kulkarni, B. S., and Kamath, P. G.: Antibiotic Med. & Clin. Ther. 5:604 (Oct.) 1958. 4. Vinnicombe, J.: Ibid. 5:474 (July) 1958. 5. Anderson, P. C., and Wissinger, H. A.: U. S. Armed Forces M. J. 10:1051 (Sept.) 1959. 6. Roepke, R. R.; Maren, T. H., and Mayer, E.: Ann. New York Acad. Sc. 60:457 (Oct.) 1957.



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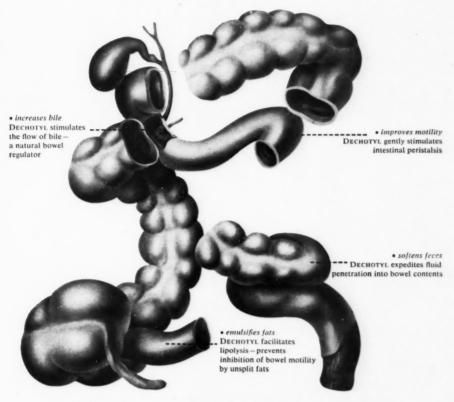


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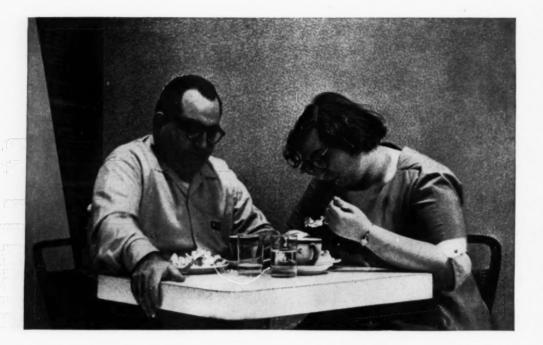
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